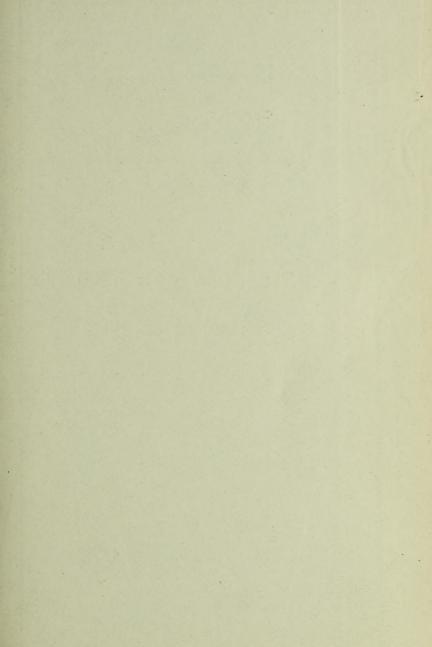


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# TUFTS COLLEGE VOI. XVII BULLETIN NO. 2

DECEMBER, 1916

### ANNUAL CATALOGUE

1916-1917

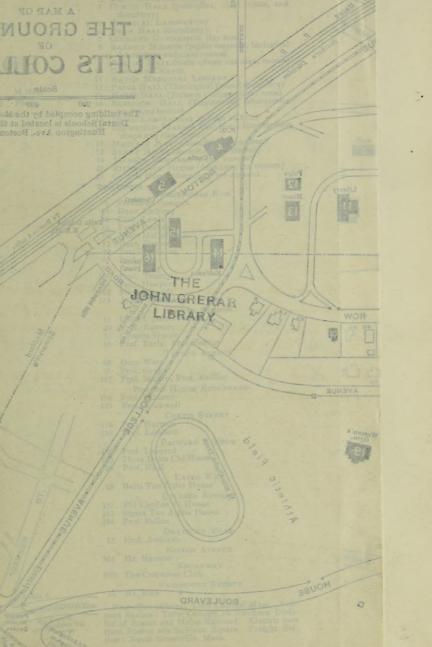
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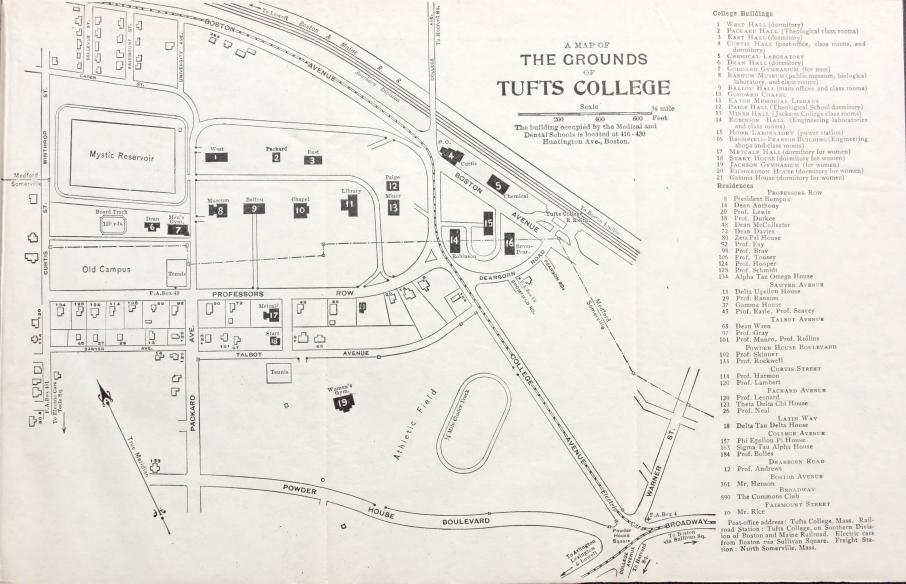


Published monthly, from November to June inclusive, at Tufts College, Mass., by the Trustees of Tufts College. Copies may be had by addressing the Registrar, Tufts College, Mass.

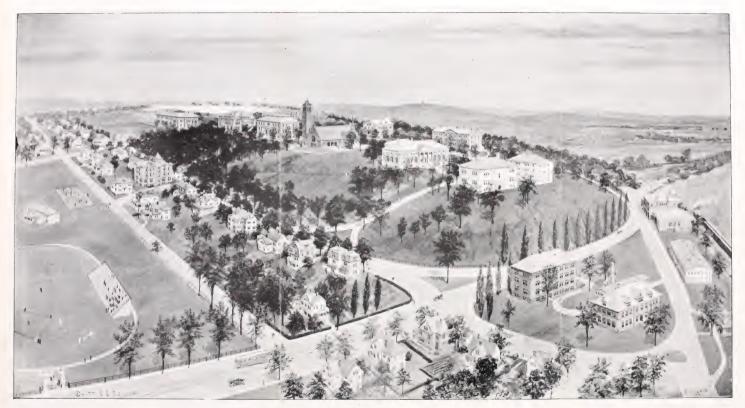
The post-office address of the School of Liberal Arts, Jackson College for Women, the Engineering School, the Bromfield-Pearson School, and the Crane Theological School, is TUFTS COLLEGE, MASS.

The address of the Medical and Dental Schools is 416-430 HUNTINGTON AVENUE, BOSTON, MASS.





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TUFTS COLLEGE

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# Tufts College Catalogue



# CATALOGUE

# TUFTS CULLEGE 1916-1917



School of Liberal Arts
Jackson College for Women
Engineering School
Bromfield-Pearson School
Crane Theological School
Graduate School
Pre-Medical Course
Medical School
Dental School

HT.

The purpose of this publication is to give information to those who may desire to become students of Tufts College, and to provide a book of reference.

It is the policy of the College not to introduce changes in requirements for admission without due notice in the catalogue, and not to impose additional requirements upon classes already enrolled. Changes in the curriculum and in the program occasionally may be necessary, and under such circumstances equitable adjustment is made.

The Registrar will be glad to answer inquiries, and an invitation to visit the College is extended to those who may desire to do so.

#### Tufts College

While the College owed its beginning to the efforts and to the support of members of the Universalist denomination, the charter provided that "No instructors in said College shall ever be required by the Trustees to profess any particular religious opinions as a test of office, and no student shall be refused admission to or denied any of the privileges, honors, or degrees of said college, on account of the religious opinions he may entertain."

Its purpose is to provide substantial instruction in fundamental subjects, and to encourage those who are eager to make use of its educational opportunities, in order that they may improve themselves and thus contribute to the general improvement of the community.

To this end the institution is using a large endowment and is enlisting the support of graduates and friends. The Faculty aims not only to teach, but to ascertain the intellectual deficiencies and proficiencies of the students, and through personal effort and sympathetic counsel to strengthen the places wherein they are weak and to develop to the utmost the places wherein they are strong.

Tufts College does not desire to enlarge its enrollment with those who seek leisure, or who look lightly upon college work, but it will do its utmost to help those who come to it with the fixed purpose of profiting by what it can give.

#### LOCATION OF TUFTS COLLEGE

#### The Buildings and Grounds in Somerville and Medford

The original buildings were located on Walnut Hill in Somerville and Medford—adjoining the City of Boston—and about five miles from the State House. Several car lines run directly to the College Grounds. The campus is large, embracing about eighty acres. There are twenty buildings used for educational and dormitory purposes. The with the grounds have an estimated value of \$1,335,000.

375.74年 丁井1 located the School of Liberal Arts, Jackson College for Women, the Engineering School, the Bromfield-Pearson School, the Crane Theological School, and the Graduate School.

#### The Buildings and Grounds in Boston

In 1893 the Tufts College Medical School was established, and in 1899 the Boston Dental College was taken over by legislative sanction. These professional schools are located in the Medical-Dental Buildings, 416 Huntington Ave., Boston, Mass. The land and buildings represent an investment of over \$300,000. There are 83,000 square feet of floor space divided into lecture rooms, laboratories, offices, etc.

The College has an interest in the Biological Laboratory at South Harpswell, Maine, which enables it to offer special privileges to officers and students.

The College is fortunate in its location. Student life at "The Hill" is substantially like that of the smaller colleges in New England. The students and Faculty form a community, the members of which are well acquainted with each other, and there are many social interests in which all share. A close intimacy between the Faculty and the student body has always prevailed.

The proximity of Boston makes it easy for students to avail themselves of the libraries, museums, and other social, educational, and cultural facilities that are offered by a large city. Students receive material benefit from the privileges offered by business houses, manufacturing plants, and other institutions.

The Medical-Dental Buildings are not far from the Library of the Boston Medical Association, are central to the larger hospitals dispensaries, and clinics, and near a score or more of scientific and educational institutions.

The control of the College is vested by the charter in a Board of Trustees, ten of whom are elected by the Alumni. The immediate control of the educational work rests with the several Faculties.

#### The Trustees of Tufts College

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Numbers following the names indicate date of expiration of term of Trustees elected by the Alumni.

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## PART I

#### THE ASSOCIATED SCHOOLS

(Located at "The Hill")

SCHOOL OF LIBERAL ARTS (Giving the degrees of A.B. and B.S.

JACKSON COLLEGE FOR WOMEN (Giving the degrees of A.B. and B.S.)

ENGINEERING SCHOOL (Giving the degree of B.S.)

BROMFIELD-PEARSON SCHOOL (One-year course. No degree)

CRANE THEOLOGICAL SCHOOL (Giving the degree of S.T.B.)

GRADUATE SCHOOL (Giving the degrees of A.M. and M.S.)

A Pre-Medical Course providing instruction equivalent to one year of college work is conducted at the Medical-Dental Buildings, but the instruction is given under the direction of the School of Liberal Arts.

#### Calendar — 1917

-	JANUARY				MAY						SEPTEMBER									
s	M	Т	w	Т	F	s	s	M	Т	w	Т	F	S	s	M	T	W	T	F	S
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	APRIL						ΑŪ	GU	ST				D	EC	EM	BE	R			
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#### Calendar of the Associated Schools

#### 1917

JAN. 3. Christmas recess ends, Wednesday evening.

FEB. 2-7. Mid-year examinations.

FEB. 7. End of first half-year, Wednesday.

FEB. 12. Second half-year begins, Monday. Registration.

FEB. 22. Washington's Birthday. Exercises are suspended.

APRIL 18. Spring recess begins, Wednesday evening.

APRIL 25. Spring recess ends, Wednesday evening.

MAY 11. Goddard Prize Readings, Friday, 8 P.M. (Goddard Chapel).

MAY 30. Memorial Day. Exercises are suspended.

JUNE 9-14. Final examinations.

JUNE 17. Baccalaureate Sermon, 4 P.M. (Goddard Chapel).

JUNE 20. Annual Commencement, Wednesday.

#### Summer Vacation, Thirteen Weeks

SEPT. 13-15. Entrance examinations given in Ballou Hall, Tufts College,
Mass. For the schedule see "Admission by Examination."

SEPT. 20. College year begins, Thursday morning. Registration.

Oct. 12. Columbus Day. Exercises are suspended.

Oct. 14. Russell Lecture, Sunday, 4 P.M. (Goddard Chapel)

Nov. 21. Announcement of Academic Honors, 12 M. (Goddard Chapel)

Nov. 29. Thanksgiving Day. Exercises are suspended. DEC. 19. Christmas recess begins, Wednesday evening.

begins, wednesday evening

#### 1918

JAN. 2. Christmas recess ends, Wednesday evening.

FEB. 1-6. Mid-year examinations.

FEB. 6. End of the first half-year, Wednesday.

FEB. 11. Second half-year begins, Monday. Registration.

FEB. 22. Washington's Birthday. Exercises are suspended.

APRIL 17. Spring recess begins, Wednesday evening.

APRIL 24. Spring recess ends, Wednesday evening.

MAY 10. Goddard Prize Readings, Friday, 8 P.M. (Goddard Chapel).

MAY 30. Memorial Day. Exercises are suspended.

JUNE 8-13. Final examinations.

JUNE 16. Baccalaureate Sermon, Sunday, 4 P.M. (Goddard Chapel).

JUNE 19. Annual Commencement, Wednesday.

#### Faculty of the Associated Schools

The post office address is Tufts College, Mass., unless otherwise indicated.

#### President

HERMON CAREY BU	MPUS, Ph.D., Sc.D	., LL.D 8 Professors Row
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#### Deans

- FRANK GEORGE WREN, A.M. . . . . . . . . . . . . . . 65 Talbot Ave.

  School of Liberal Arts
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- LEE SULLIVAN McCOLLESTER, D.D. . . . . 48 Professors Row Crane Theological School
- CHARLES ERNEST FAY, A.M., LITT.D. . . . . . 92 Professors Row

  Graduate School

#### Chaplain

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#### Recording Secretary

WILLIAM HOWELL REED, A.M. . . . . 81 Walnut Ave., Roxbury

#### Professors Emeriti

- CHARLES HALL LEONARD, A.M., D.D., LL.D. . 120 Packard Ave.

  Goddard Professor of Homiletics and Pastoral Theology,
  and Dean of the Crane Theological School
- CHARLES DURLIN BRAY, C.E., A.M. . . . . . . 98 Professors Row

  Mechanical Engineering
- GEORGE MILFORD HARMON, A.M., D.D. . . . . 114 Curtis St. Biblical Theology
- WILLIAM GEORGE TOUSEY, A.M., S.T.D. . . . 106 Professors Row Logic and Ethics

#### Professors

Arranged in the order of their service at Tufts.

- Walker Professor of Mathematics, and Dean of the School of
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- CHARLES HARRIS CHASE, S.B. . . . . 39 Lincoln St., Stoneham Steam Engineering
- WILLIAM KENDALL DENISON, A.M. . 42 Fletcher St., Winchester Latin Language and Literature
- \*HENRY CLAYTON METCALF, A.B., Ph.D. . . 31 Sheffield Road, Jackson Professor of Political Science Winchester
- EDWIN CORTLANDT BOLLES, A.M., Ph.D., D.D., LL.D.

  Dickson Professor of English and American History 184 College Ave.
- WILLIAM RICHARD RANSOM, A.M. . . . . . . 29 Sawyer Ave.

  Mathematics
- FRANK BERRY SANBORN, C.E., M.S. . . . 8 Buena Vista Park

  Civil Engineering

  N. Cambridge
- EDWARD HENRY ROCKWELL, S.B. 133 Powder House Boulevard,

  Structural Engineering W. Somerville
- ALFRED CHURCH LANE, A.M., Ph.D., Sc.D. . . . 22 Arlington St.,

  Pearson Professor of Geology and Mineralogy

  N. Cambridge

- HINCKLEY GILBERT MITCHELL, D.D. . 36 Pinckney St., Boston Hebrew and Old Testament Exegesis

<sup>\*</sup>On leave of absence.

ARTHUR IRVING ANDREWS, Ph.D. . . . . . . . . . 12 Dearborn Rd.

KARL SCHMIDT, A.M., Ph.D. . . . . . . . . . 128 Professors Row

LEE SULLIVAN McCOLLESTER, D.D. . . . . . 48 Professors Row Packard Professor of Christian Theology, and Dean of

CLARENCE RUSSELL SKINNER, A.M. . . 102 Powder House Blvd.

History and Public Law

Philosophy and Education

Zoology

Crane Theological School

Woodbridge Professor of Applied Christianity W. Somervill
CHARLES HENRY GRAY, Ph.D
Assistant Professors Arranged in the order of their service at Tufts.
GEORGE FRANCIS ASHLEY 47 Avon St., Somervill  Technical Drawing
EDWIN BUTLER ROLLINS, B.S 101 Talbot Ave Electrical Engineering
MELVILLE SMITH MUNRO, B.S 101 Talbot Ave Electrical Engineering
WILLIAM HOWELL REED, A.M 81 Walnut Ave., Roxbur Modern Languages
ALEXANDER DILLINGHAM, A.M 40 Wildwood Ave., Arlington  Mathematics
FRANK ELIAS SEAVEY, A.M
RICHARD CURTIS SMITH, B.S 15 Warren St., W. Medford Structural Engineering
SAMUEL LUCAS CONNER, M.S 33 Emery St., Medford Hillside Railroad Engineering
HOWARD HASTINGS CARROLL, B.S 66 Wyman St., W. Medford Technical Drawing
ALBERT HATTON GILMER, A.M 154 Woburn St., W. Medford English
HENRY HOWARD MARVIN, B.S., Ph.D 59 W. Adams St.  Physics Medford Hillside
EUGENE HOWARD BABBITT, A.B Ballou Hal Modern Languages

FACULTY 17

RALPH BYRON WILSON, A.M	. 28	Whitman	St.,	W. S	Somervill	е
Political Science						

- VANNEVAR BUSH, M.S., ENG.D. . . . . 38 Dearborn St., Medford Electrical Engineering
- WILLIAM FRANK WYATT, Ph.D. . . . . . . . . . 12 Curtis Ave.

#### Instructors

- CONRAD ARNOLD ADAMS, B.S. . . . . 108 College Ave., Medford

  Mechanic Arts
- CROSBY FRED BAKER, M.S. . . . . 75 Pearson Rd., W. Somerville Chemistry
- HARRY POOLE BURDEN, B.S. . . 34 W. Adams St., W. Somerville Civil Engineering
- LOUIS RAYMOND BURNETT, M.D. . . 11 Everett St., Cambridge Physical Education
- JOSEPH CHANDLER, Ph.D. . . . 7 Edison Ave., Medford Hillside
  Organic Chemistry
- SHIRLEY WILCOX HARVEY, A.B. . . . . . . . Dean Hall, 6

  English
- MERRILL CRISTY HILL, A.M. . . . . 135 North St., W. Somerville

  Modern Languages in the Engineering School
- JOHN LOUIS CHARLES KEEGEN, A.M. . . . . . West Hall, 8

  English and Assistant to Dr. Bolles
- NATHANIEL HOBBS KNIGHT, B.S. . . . 44 Stearns Ave., Medford *Physics*
- EDGAR MacNAUGHTON, M.E. . . 88 Quincy St., Medford Hillside Mechanical Engineering
- MARY CALDWELL MURRAY . . . . . . . . . . . Start House

  Physical Education in Jackson College
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- AUGUSTE LAWRENCE POULEUR, M.S. . 60 Powder House Blvd.,

  \*Chemistry\*\* W. Somerville
- HAROLD JAMES POWER, B.S. . . . . . . . . . P.O. Box 55

  Radio-Engineering
- HARRIS RICE, S.B. . . . . . . . . . . . . . . . . Medford Hillside Walker Special Instructor in Mathematics

LLOYD PRESTON RICE, A.M. . . . . 42 Conant Hall, Cambridge

Assistants

MARY STONE BRUCE, A.M. . . Hotel Cluny, 543 Boylston St., Boston

CARL WESTON STAPLES . . . . . . . . Chemical Laboratory

Political Science

Political Science

Education

French

Chemistry
FRANK GUSTAVE WAHLEN East, 12
Mechanic Arts
GENEVA ALICE WHEET Metcalf, C
English
Administrative Office of the Associated Schools
MASON EDWARD BENNETT 54 Lyman Ave., Medford Clerk in the Office of the Dean of the Engineering School
ANITA ELIZABETH BALZER Gamma House, 7  Assistant in the Office of the Dean of Jackson College
LESLIE NATHANIEL GEBHARD, LL.B
WILHELMINE HAZEL LANGDELL 253 Salem St., Malden Assistant in the College Office
IRVING DAVID MARSHALL
GEORGE STEWART MILLER, A.M 145 Forest St., Medford Secretary to the President
MARION WARD RAYMENTON Richardson House, 3  Assistant in the Office of the Dean of Jackson College
DOROTHY MAY SALTMARSH 17½ Marshall St., Somerville  Stenographic Assistant
BEULAH SUSIE TILLOTSON 55 High St., Everett  Clerk in the Office of the Dean of the Crane Theological School
NELLIE ALVIRA WRIGHT 245 Medford St., Somerville  *Registrar**
JOSEPH ELLSWORTH POOLE Chemical Laboratory  Stock Room Clerk in Chemical Laboratory

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Richardson House
MRS. MARY C. HULL
Gamma House
MISS MARY C. MURRAY
Alpha House Mrs. GRACE G. WATERMAN
Metcalf Hall
Medical Advisers
JOHN ALLAN McLEAN, M.D 16 Curtis St., W. Somerville
Medical Adviser for the Men's Dormitories
EMMA JULIA WAGNER, M.D 370 Highland Ave., W. Somerville Physical Examiner in Jackson College
Russell Lecturer, 1917
MARION LEROY BURTON, Ph.D., D.D., LL.D.
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Librarian, Emeritus
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ARTHUR EARLE BAIRD Paige, 25  Student Assistant
ALFRED STORER COLE
Student Assistant
HELEN ALMIRA ROWE Richardson, I  Student Assistant
Curators of Buildings
Ballou Hall Dean Wren
Barnum Museum Professor Neal
Bromfield-Pearson Building Professor Chase
Chapel
Curtis Hall Professor Durkee
Gymnasium
Library
Miner Hall Dean Davies
Packard Hall Dean McCollester
Robinson Hall
Women's Gymnasium Dean Davies

#### The Organization of the Faculties

Each of the Associated Schools has its own Faculty and Standing Committees. An officer may serve on several faculties, and students of several schools may attend one and the same class exercise. Since the several faculties have many interests in common, they unite in joint session as a Faculty of Arts and Sciences.

The Faculty of Arts and Sciences regularly convenes on the first Monday of each month, and has the following Standing Committees:

ADMINISTRATION: President Bumpus, *Chairman*; DeansWren, Anthony, McCollester, Davies and Fay; Professors Lambert and Hooper.

LIBRARY: President Bumpus, *Chairman*; Dean Fay, Professors Andrews, Hooper, and Gray.

PROGRAM AND EXAMINATIONS: Dean Wren, Chairman; Dean Anthony and Professor Denison.

CATALOGUE: Dean Anthony, Chairman; Professors Denison and Seavey.

BOOKS AND SUPPLIES: Professor Lewis, Chairman; Professors Ashley, Conner, and Mr. Burden.

MEMBERS ON THE PART OF THE FACULTY OF ARTS AND SCIENCES OF THE BOARD OF DIRECTORS OF ATHLETICS: Dean Wren, Chairman; Dean Anthony, Dr. Burnett.

STUDENT ORGANIZATIONS AND USE OF COLLEGE BUILDINGS: Professor Hooper, *Chairman*; Dean Anthony, Professors Denison, Rockwell, and Gilmer.

STUDENT EMPLOYMENT: Professor Carroll, *Chairman*; Professors Gilmer and Wilson.

BOARD OF EDITORS OF TUFTS COLLEGE STUDIES: President Bumpus, Chairman; Professors Fay, Neal, Metcalf, and Rockwell.

#### Requirements for Admission

Candidates for admission to the School of Liberal Arts, Jackson College for Women, the Engineering School and the Crane Theological School must have received adequate preparation in certain subjects, aggregating fifteen units which fall in the groups mentioned below. In these groups the values of the several subjects are given in units. Each unit "represents a year's study in any subject in a secondary school, constituting approximately a quarter of a full year's work."

#### 1. Prescribed Group

All of the	following, which aggregate.		. 8 units
	English 1	· I ½	
	English 2	I ½	
	Foreign Language	2†	
	History	I‡	
	Algebra AI	I	
	Plane Geometry	I	

#### 2. Elective Group

A sufficient number	of the following	to aggregate.	. 4 units
Foreign History	Language 1, or	2, or 3, or 4†	

History	I or 2‡
Algebra A2	I
Physics	I
Chemistry	I
Solid Geometry	1/2
Trigonometry	1/2
Freehand Drawing	1/2

#### 3. Free Margin Group

This group may be made up of any subjects (not counted in the previous groups) which an approved secondary school counts toward graduation, and which are certified by the Principal to be equivalent to . . . . . . . . . . . . . . . . 3 units

Total 15 units

<sup>†</sup>The foreign languages offered for admission are to be selected from the following: Latin, Greek, French, and German. Two, 3 or 4 units may be counted in Latin, and either 2 or 3 units in Greek, French or German. Any other foreign language in which systematic instruction has been received for a period of at least two years may be counted for 2 units.

<sup>‡</sup>Ancient History, English History, or History and Government of the United States.

Candidates for the degree of Bachelor of Arts must present either 4 units in Latin or 3 in Greek.

Candidates for admission to the Engineering School must present 2 units in Algebra.

It is recommended that at least 9 of the units presented for admission be confined to three subjects.

Detailed information concerning the amount and character of the work demanded in preparation will be found in the Appendix.

#### METHODS OF ADMISSION

Admission to Tufts College may be obtained by certificate, by examination, or by a combination of the two. Every candidate for admission must present a testimonial of good character from the principal under whom he was prepared for college.

#### Admission by Certificate

In order to make the transition from the school to the college more direct, Tufts College has an arrangement with certain high schools whereby students of good standing may pass from the high school directly into the College without the formality of examination. The conditions controlling this arrangement require that the school shall be on the approved list of the New England College Entrance Certificate Board, and that in certain subjects the pupil shall have completed with certificate grade the amount required for admission to the Freshman class of Tufts College.

The principals of the accredited schools are provided with blanks prepared for this purpose.

Certificates showing that candidates have fulfilled the admission requirements of another college or university will be accepted, in so far as they fulfill the conditions controlling admission to Tufts.

The academic diploma of the Regents of the State of New York will be accepted in satisfaction of the requirements for admission when such diploma covers the subjects required for entrance.

The student should make sure that the certificate upon which he intends to enter Tufts College is sent to the Registrar (Tufts College, Mass.) at the earliest possible date — preferably at the time of graduation — and that he receives from the College an acknowledgment assuring him that the certificate has been received and that his name has been enrolled.

All schools in New England which desire the certificate privilege should apply to the Secretary of the Board, Professor Frank W. Nicolson, Wesleyan University, Middletown, Conn., before April 1 of the year for which the certificate privilege is desired.

Applications for the certificate privilege for schools outside of New England should be made by the Principal on a blank provided for the purpose by the Registrar of the College. Applications should be received before April 1, in order that the school may be placed upon the approved list for the next academic year.

#### Admission by Examination

The examinations may be taken in June or in September, or a part in June and a part in September.

In June, 1917, the admission examinations of this College will be the examinations of the College Entrance Examination Board, of which Tufts College is a member. The examinations will be held during the week June 18–23, 1917, at Robinson Hall, Tufts College, Mass., and at other places to be announced by the Board.

For further information consult the Appendix or communicate with the Secretary of the College Entrance Examination Board, 431 West 117th Street, New York, N. Y.

The September examinations are prepared and given by Tufts College in accordance with the following schedule.

# September, 1917, Examinations for Admission to the Associated Schools

(These examinations will be given in Ballou Hall, Tufts College, Mass.)

- SEPT. 13. Elementary, Intermediate, and Advanced French, 9 to 11; Elementary, Intermediate, and Advanced German, 11 to 1; Elementary and Advanced Greek, Advanced Algebra and Trigonometry, 2 to 5.
- SEPT. 14. Algebra, 9 to 10.30; English, 10.30 to 12.30; Plane Geometry, 2 to 4; Physics, 4 to 5.
- SEPT. 15. Elementary, Intermediate, Advanced Latin and Drawing, 9 to 12; Solid Geometry, 9 to 11; Biology, Botany, Geography, Geology, Zoology, and Economics, 11 to 1; History, 2 to 4; Chemistry, 4 to 5.

#### Admission from other Colleges

Students of other colleges may be admitted to Tufts College under the following conditions:

They must present evidence that they have maintained creditable and honorable standing. They must present certificates showing in detail the amount and character of their college work. They must give satisfactory reasons for desiring transfer.

Such students will be enrolled as "unclassified" until they have demonstrated their qualifications and scholarship.

# General Information

#### REGISTRATION

Having passed the entrance examinations of June or of September, or having been duly certified, the applicant for admission should at once ask the College office for registration blanks. These blanks should be filled out promptly and with fidelity, and returned to the Registrar, together with the registration fee of five dollars.

The officers of Tufts College take an interest in the welfare of the student, and the value of the advice which they can give is in no small measure dependent upon the fullness with which the registration data are given.

#### THE FILING OF PROGRAMS

The program is a statement of the several studies that the student desires to pursue, the officers that are to give instruction and the places and hours at which the classes are to meet. Programs are prepared in accordance with the following schedule.

- I. FOR STUDENTS IN THE SCHOOL OF LIBERAL ARTS, THE CRANE THEOLOGICAL SCHOOL, AND THE GRADUATE SCHOOL:
- 9.30 A.M.—On the "opening day" of the term (in September on Thursday, and in February on Monday), those filing their programs for the first time assemble in Room 4, Ballou Hall, at which time the students are assigned to certain officers who act as their advisers in the preparation of their programs. When the programs are prepared, they are filed with the Registrar.

9-II A.M.—Members of the three upper classes file their programs in accordance with conferences which were held with their major instructors during the previous term.

# II. FOR STUDENTS IN JACKSON COLLEGE FOR WOMEN:

II A.M.—12 M.—On the "opening day" of the term, all students obtain blanks and file programs at the Dean's office. Members of the three upper classes register in accordance with programs prepared at conference with major instructors held previous to June first.

11.15. A.M.—All students registering for the first time assemble in Room 6, Miner Hall, for instruction concerning registration.

# II. FOR STUDENTS IN THE ENGINEERING SCHOOL AND THE BROMFIELD-PEARSON SCHOOL:

II A.M.—On the "opening day" of the term, those filing their programs for the first time assemble in Goddard Chapel, where information is given concerning courses of study and the preparation of programs.

When the programs are prepared they are filed with the Registrar.

10-12 A.M.—Members of the three upper classes file their programs in accordance with conferences held during the examination period of the previous term.

During the hours set apart for filing of programs, instructors are available for consultation and for the approval of plans of study, in rooms announced on the bulletin board.

Regular program appointments are in force on the second day of each term.

The College desires that its students should begin their work with promptness. Students who are late in registering or in filing their programs cause irregularities and confusion in the administrative office. Upper-class men who are not present on the "opening day" are subject to a registration fee of five dollars.

#### PROMOTION

Students are not promoted from the Freshman class until they have completed all requirements for admission.

Candidates for the degree of Bachelor of Arts or Bachelor of Science (except in Engineering), before promotion to the Sophomore class, must have received a credit of not less than twenty-four term hours, and for promotion to the Junior class a credit of not less than fifty-four term hours. To become a member of the Senior class, a student must have credit for not less than eighty-seven term hours, and to graduate he must have had a credit of one hundred twenty-two term hours.

Candidates for the degree of Bachelor of Science in Engineering must have received, for promotion to the Sophomore class, a credit of not less than twenty-nine term hours; for promotion to the Junior class a credit of not less than sixty-four term hours; for promotion to the Senior class a credit of not less than ninety-nine term hours, and for graduation a credit of one hundred forty term hours.

#### GRADES OF SCHOLARSHIP

Scholastic standing is officially recorded as follows: A, excellent; B, good; C, fair; L, barely passable; F, not passable; FF, discreditable. I is used when a student for any cause fails to complete a subject.

The marks I and F impose a condition which must be removed at a date to be determined by the Committee on Promotions. In case marks of I or F are not so removed, the entry will be changed to FF. The responsibility for the removal of any condition rests with the student, who is required to make all necessary arrangements with the instructor and finally to present at the office of the Registrar a statement from the instructor that the work has been performed.

Reports of the work of Freshmen are sent to parents at the close of the first term. Reports for the year are issued in July.

#### TERMS AND VACATIONS

The year is divided into two terms. College exercises are suspended on certain dates in accordance with the calendar published at the beginning of the catalogue. An examination period of five days is held at the close of each term, during which the daily class exercises are suspended.

Students are not expected to extend their vacations by absenting themselves beyond the limit of the calendar. To prevent this extension they are required, except on holidays, to report in person at the Registrar's office within the two hours following the last class appointment preceding each vacation except at the mid-year intermission; and within two hours before their first class appointment following such vacation. This process is known as "signing off" and "signing on."

A fine of two dollars will be imposed on each student who shall fail to report as above provided. The regular registration at the beginning of each term shall be construed as "signing on."

#### ABSENCES

Students are required to notify the Registrar of absence from any cause involving more than three consecutive program appointments. This report should, if possible, be made in advance, and should state the cause of absence and the probable duration. After absence, notification should be given the Registrar before entering upon college work.

These reports are for the information of the college authorities, and do not excuse the student from chapel attendance, or from his obligations to the various instructors.

No student organization is allowed to make engagements involving absence from college exercises unless such engagements are first approved by the appropriate committee of the Faculty.

#### RELIGIOUS OBSERVANCES

Goddard Chapel, erected in 1882-83, is the gift of Mrs. Mary T. Goddard, as a memorial to her husband, Thomas A. Goddard. The week-day exercises are conducted by the College Chaplain, Dr. Edwin C. Bolles. Attendance is required.

The RUSSELL LECTURE, established in accordance with a bequest of James Russell of Arlington, is delivered by either a clergyman or a layman, on a subject prescribed by the testator.

Two subjects are presented, in alternate years.

The subject for 1916 was "The Importance of Christian Faith and Belief in the Formation of the Character of the Good Citizen and the Good Man."

The subject for 1917 is "The Sufficiency of the Promises of the Gospel to meet the Reasonable Wants of Man both in Time and in Eternity."

#### TUFTS COLLEGE STUDIES

A publication called "Tufts College Studies" has been established, as a means of presenting the results of original work done in the several departments of the College. The numbers, which are issued from time to time, are distributed as exchanges to educational institutions and learned societies. Correspondence regarding exchanges should be addressed to the Librarian of Tufts College.

#### ATHLETICS

The supervision and direction of all athletic sports is vested in a Board of Directors of Athletics, consisting of nine members, three of whom are appointed from the Faculty, three from the Alumni, and three elected from the Undergraduates. This board through its sub-committees controls the expenditure of moneys, the hiring of coaches, the eligibility of players, and the arranging of games. The Director of the Gymnasium, after physical examination, limits the candidates for college teams to those who have shown themselves qualified to engage in strenuous exercise.

#### EXPENSES

Realizing that the cost of collegiate instruction may prevent certain students from carrying their education beyond that provided by the public schools, and desiring that the facilities offered by Tufts College shall not be denied those of limited means, the Trustees have, for many years, refrained from making any increase in the charge for tuition.

The buildings, grounds and various endowments of the College have an aggregate value of over \$3,000,000 so that the amount actually paid to the College by any student is only a fraction of the cost of the instruction provided.

The expenses of the student are as follows:

#### Examination Fee

A fee of five dollars is charged for examining the student, in order to test the thoroughness of his preparation and to determine his fitness for collegiate work.

If the student is examined in June by the College Entrance Examination Board, the fee is sent by the student to the Secretary of the Board, Hamilton Hall, P.O. Sta. H, New York, N. Y.

If the student is examined in September by examiners at Tufts College, the fee is paid to the Bursar of the College before the examination is taken. If the student is examined in both June and September two fees are necessary.

If the student enters "on certificate" or on the "academic diploma" of the Regents of the State of New York, there is no examination fee.

# Registration Fee

This charge of five dollars is made but once. It covers the cost of registering the student as a member of the College, and gives provisional enrollment until the courses of study have been arranged. It is a guarantee on the part of the student of his intention to assume the duties and privileges of student-membership in some one of the Associated Schools of the College.

# Tuition Fee

The charge for each term or semester of instruction in the several Associated Schools is given in the following table.

Cabaal of Tibaaal Asta					#6
School of Liberal Arts		٠		۰	\$62.50
Jackson College for Women			٠		62.50
Engineering School	٠	٠			87.50
Bromfield-Pearson School .					75.00
Crane Theological School .		4	٠	۰	50.00
Graduate School					50.00

Before receiving the degree of A.B. or B.S. students must have paid tuition charges for eight terms of instruction. This regulation applies whether the time actually consumed is three, four or more college years.

In the case of students admitted to advanced standing the fees will be prorated.

### Fees For Gymnasium And Student Organizations

By request of the student body, the Bursar has been instructed to collect assessments for the maintenance of student activities, such as field-sports, the college *Weekly*, reading room, etc. These are combined with the gymnasium fee and amount to \$12.00 for the first term and \$5.00 for the second term. Each student is put on the subscription list of the *Tufts Weekly*, and receives a season ticket admitting him to the intercollegiate contests.

#### Room Rent

Students may or may not reside on the campus. It is customary for a dormitory room, or suite of rooms, to be occupied by two students. Each pays one-half rent, which, including heat and services, ranges from \$12.50 to \$40.00 per term. The rooms may be occupied from the Wednesday of the week preceding the opening of the College year to the Saturday following Commencement. Except in Paige Hall, students provide their own furniture.

The students are custodians of the rooms and dormitories in which they reside. Injury to the rooms or buildings other than normal wear is charged to the occupants.

Non-resident students may obtain the use of "day rooms" upon the payment of a moderate fee. The rooms are assigned by the Bursar, under regulations approved by the Board of Trustees. All correspondence connected with the engagement and assignment of rooms should be addressed to the Bursar.

Room rent in the several dormitories may be tabulated as follows; the prices given are the rate per student per term.

# Dormitories For Men Double Rooms

	Curtis	Dean	East	Paige	West	Total
\$13.75			2			2
15.00			2			2
18.50					2	2
20.00	2		4		2	8
21.50	6	2	4			12
22.50	I		I			2
23.00			2	٠.	2	4
24.00			1		6	7
25.00	I		5		2	8
25.50			I		2	3
27.50			5			5
29.50			I		2	3
32.00					6	6
35.00					4	4
37.50					2	2
40.00		I 2			2	14
Total Double Rooms	10	14	28	0	32	84
		Sing	le Rooms	2		
		Oing	ic Rooms	•		
\$12.50					I	I
15.00			I			I
20.00			3			3
21.50			2			2
22.50	I					I
25.00	I					I
37.50				36		36
Total Single Rooms	2	0	6	36	I	45
Total =	12	14	34	36	33	129

## General Maintenance Fee

To defray a part of the cost of maintaining buildings and grounds, students are assessed five dollars per term. This fee is included in the rental charges of those residing at the College.

## Laboratory and Other Fees

Students taking laboratory courses in Geology, Mineralogy, Chemistry or Biology are charged four dollars per term for material regularly consumed. The cost of breakage is collected at the close of the term. Before graduation, seniors are charged two dollars to cover the cost of the diploma.

#### THE TIMES AT WHICH COLLEGE PAYMENTS ARE MADE

All term bills must be paid in advance, and the College prefers to have the charges of the entire term paid at the time of registration, or before the date of the opening of the term. Realizing, however, that it is sometimes difficult for those who are working their way to comply with this regulation, it permits, for the present, the following schedule, to the terms of which it is obliged rigidly to adhere:

#### First Term

On or before October 1, \$50, On account.
" November 1, Balance of term bill.

#### Second Term

On or before February 15, \$50, On account.

"March 1, Balance of term bill.

All college charges are collected by the Bursar. Checks should be made payable to the Trustees of Tufts College. Promotions, degrees and letters of honorable dismissal cannot be granted to those in arrears.

A student may be suspended or dismissed for failure to keep his bills promptly paid, or for other good and sufficient cause.

No part of the fees and charges for a term is returnable to the student if he leaves during the term.

#### SCHOLARSHIPS

Tufts College has been singularly blessed in that many of its friends have given various sums, the interest on which is awarded to students who find it difficult to meet all of the financial exactions of college training.

Scholarships are awarded by the Trustees on the recommendation of the Faculty. The Faculty desires to become acquainted with the students before making its recommendation, and it therefore advises those who are coming to the College for the first time and who feel that they must have scholarship aid, to make early request to the Registrar for a scholarship application blank and to fill in this blank and mail it to the Chairman of the Scholarship Committee prior to the beginning of the term.

The student should, if possible, be prepared, himself, to meet the first payment of the term, — that is, the payment due October 1, or February 15. After the scholarship has been awarded, it will be credited to the second payment and reduce this amount accordingly.

In the year 1915-16 the Trustees distributed approximately \$12,000 to students in good standing. During the first term of the year 1916-17 scholarship awards were made as follows:

89 awards of \$25.00 each
3 " " 37.50 "
29 " " 50.00 "
3 " " 62.50 "

Scholarship aid will depend upon the student's need and the grade of his work. His obligations to the College must be met promptly, his attendance must be regular, and his influence on the student body must be in every sense wholesome. His loyalty to the College and his sense of common gratitude should dictate that as soon as possible after graduation he return to the College the several sums that he has received in order that others in need may be assisted in their efforts to obtain privileges similar to those that he has enjoyed.

The scholarships and the amount of the endowment are here listed.

THE STATE SCHOLARSHIPS. (3)

Established in 1859 in accordance with a resolve of the Commonwealth.

THE A. A. MINER SCHOLARSHIP. \$1,000

Founded in 1864 by Alonzo Ames Miner, D.D., of Boston.

THE HOWLAND SCHOLARSHIPS. (5) \$10,366.87 Established in 1865 from the income of the bequest of Edwin Howland, of South Africa. THE WALKER MATHEMATICAL SCHOLARSHIPS. Established in 1865 in honor of William J. Walker, M.D., of Newport, R. I., and payable from the income of the Walker Fund. THE PERKINS SCHOLARSHIP. \$1,000 Founded in 1866 by James D. Perkins, of New Rochelle, N. Y. THE MOSES DAY SCHOLARSHIPS. \$4,000 Founded in 1880 by Moses Day, of Roxbury. THE MOSES DAY SCHOLARSHIP. \$1,000 Founded in 1880 by Moses Day, of Roxbury. THE ANDERSON SCHOLARSHIP. \$2,000 Founded in 1890 by John M. Anderson, of Salem, in the name of John M. and Rebecca Anderson. THE WILLIAM OSCAR CORNELL SCHOLARSHIP. \$2,500 Founded in 1890 by William Oscar Cornell, of Providence, R. I. THE MARTHA GOLDTHWAITE MEMORIAL SCHOLARSHIP. \$2,000 Founded in 1890 by Willard Goldthwaite, of Salem. THE A. A. MINER SCHOLARSHIP. \$2,000 Founded in 1890 by Alonzo Ames Miner, D.D., of Boston. THE NORCROSS SCHOLARSHIP. \$2,000 Founded in 1890 by James A. and Mrs. Mary E. Norcross, of Worcester. THE REBECCA T. ROBINSON SCHOLARSHIP. \$2,000 Founded in 1890 by Charles Robinson, LL.D., of Newton. THE LAURA A. SCOTT SCHOLARSHIP. \$2,000 Founded in 1890 by Mrs. Laura A. Scott, of Ridgefield, Conn. THE STOW SCHOLARSHIP. \$2,000 Founded in 1890 by Mrs. Eugenia D. Stow, of Meriden, Conn. THE TALBOT SCHOLARSHIP. \$2,000 Founded in 1890 by Newton Talbot, of Boston. THE TRAVELLI SCHOLARSHIP. \$2,000 Founded in 1890 by Mrs. Emma R. Travelli, of Newton. THE AMASA AND HANNAH L. WHITING SCHOLARSHIP. \$2,000 Founded in 1890 by Mrs. Hannah L. Whiting, of Hingham. THE WHITTIER SCHOLARSHIP. \$2,000

Founded in 1890 by Charles Whittier, of Roxbury, in the name of

Charles and Eliza Isabel Whittier.

THE MARIA P. WINN SCHOLARSHIP.  Established in 1890 from a bequest of Mrs. Maria P. Winn, of	\$2,000 Woburn.
THE HOSEA BALLOU, 2D, MEMORIAL SCHOLARSHIP. Founded in 1891 by Mrs. Mary T. Goddard, of Newton.	\$2,000
THE HENRY F. BARROWS SCHOLARSHIP. Founded in 1891 by Henry F. Barrows, of North Attleboro.	\$2,000
THE EDWIN H. CHAPIN MEMORIAL SCHOLARSHIP.  Founded in 1891 by friends of Edwin Hubbell Chapin, New York City.	\$2,000 D.D, of
THE ANDREW J. CLARK MEMORIAL SCHOLARSHIP. Founded in 1891 by Mrs. Abbie B. Clark, of Orange.	\$2,000
THE HENRY E. COBB SCHOLARSHIP. Founded in 1891 by Henry E. Cobb, of Boston.	\$2,000
THE COUSENS SCHOLARSHIP.  Founded in 1891 by John E. Cousens, of Brookline, in the of John E. and Sarah C. Cousens.	\$2,000 he name
THE THOMAS A. GODDARD MEMORIAL SCHOLARSHIP. Founded in 1891 by Mrs. Mary T. Goddard, of Newton.	\$2,000
THE J. H. MORLEY MEMORIAL SCHOLARSHIP.  Founded in 1891 by Herbert Small Morley, of Templeton.	\$2,000
THE ELLERY E. PECK MEMORIAL SCHOLARSHIP. Founded in 1891 by Henry Rollins, of Bangor, Me.	\$2,500
THE SARAH E. SAYLES MEMORIAL SCHOLARSHIP. Founded in 1891 by Albert W. Sayles, of Lowell.	\$2,000
THE BENJAMIN F. SPINNEY SCHOLARSHIP. Founded in 1891 by Benjamin F. Spinney, of Lynn.	\$2,000
THE SIMONS MEMORIAL SCHOLARSHIP.  Founded in 1891 by Mrs. Mary A. Simons, of Manchester, Memory of Hiram H., Augustus, and Frank Simons.	\$2,000 N. H., in
THE MARY ANN WARD SCHOLARSHIP. Founded in 1892 by Sylvester L. Ward of Boston.	\$2,000
THE SIMMONS SCHOLARSHIPS. (2) Founded in 1895 by Robert F. Simmons, of Attleboro, in the Mary F. and Robert F. Simmons.	\$4,000 name of
THE JOHN B. PERKINS SCHOLARSHIP. Founded in 1896 by Ann Maria Perkins, of Medford.	\$2,000
THE JOSHUA S. AND HARRIET N. WHITE SCHOLARSHIP. Founded in 1896 by Joshua S. White, of Pawtucket, R. I.	\$2,000
THE BARNARD SCHOLARSHIPS. (3) Founded in 1897 by Mrs. Caroline M. Barnard, of Everett.	\$7,000

THE BARTIETT SCHOLARSHIP

THE BARTLETT SCHOLARSHIP.  Founded in 1897 by Mrs. Nancy Bartlett, of Milford.	\$2,000
THE B. H. DAVIS SCHOLARSHIP.	\$2,000
Founded in 1897 by the Rev. B. H. Davis, of Weymouth, benefit of students of the School of Liberal Arts who are pr to enter the Christian ministry.	
THE LATIMER W. BALLOU SCHOLARSHIP.  Founded in 1898 by Latimer W. Ballou, of Woonsocket, R. I.	\$2,000
THE JOSEPH D. PEIRCE MEMORIAL SCHOLARSHIP.  Founded in 1898 by the children and other relatives of J. D. D.D., of Attleboro.	\$1,250 Peirce,
THE JOSEPH H. WALKER SCHOLARSHIP. Founded in 1898 by Joseph H. Walker, of Worcester.	\$1,000
THE RHODE ISLAND SCHOLARSHIP.  Founded in 1899 by several persons in Rhode Island.	\$2,100
THE GEORGE C. THOMAS SCHOLARSHIP.  Founded in 1899 by George C. Thomas, of Philadelphia, Pa.	\$1,000
THE ALBERT W. SAYLES SCHOLARSHIP.  Founded in 1899 by Albert W. Sayles, of Lowell.	\$1,466
THE NATHANIEL WHITE SCHOLARSHIP.  Founded in 1899 by Armenia S. White, of Concord, N. H.	\$1,200
THE LIZZIE P. ALLEN SCHOLARSHIP.  Founded in 1900 by Lizzie P. Allen, of Derby Line, Vermont.	\$2,000
THE LIZZIE P. ALLEN SCHOLARSHIP.  Founded in 1900 by Lizzie P. Allen, of Derby Line, Vermont.	\$1,000
THE CHARLES AND FANNIE A. MINER BOOTH SCHOLARSHIPS. (2) Founded in 1900 by Charles Booth, of Springfield, Vermont.	\$5,000
THE LUTHER GILBERT SCHOLARSHIP.  Founded in 1902 by Mrs. Luther Gilbert, of Roxbury.	\$2,000
THE JAMES M. AND EMILY COOK SCHOLARSHIP. Founded in 1903 by Henrietta J. States, of Boston.	\$2,000
THE WILLIAM H. SHERMAN SCHOLARSHIP. Founded in 1903 by William H. Sherman, of Cambridge.	\$2,000
THE DAVIS COOK SCHOLARSHIP.  Founded in 1904 by Davis Cook, of Cumberland, R. I.	\$2,000
THE MARY A. RICHARDSON SCHOLARSHIP. Founded in 1904 by Mrs. Mary A. Richardson, of Worcester.	\$2,500
THE AUSTIN B. FLETCHER SCHOLARSHIP.	\$2,000

Founded in 1905 by Austin Barclay Fletcher, of New York City.

THE WARREN SCHOLARSHIPS.	(2)					
Founded in 1905 by Dr. Ira	Warren of	Boston.				
THE MARY L. GROCE SCHOLARSHIP.						

Founded in 1906 by Mary L. Groce, of Roxbury.

THE JONAS CLARK WELLINGTON SCHOLARSHIP. \$2,500
Founded in 1906 by Mrs. Sarah C. Fisher Wellington, of Cambridge.

\$2,000

THE JOHN MURRAY SPRAGUE AND ELIZA FLETCHER SPRAGUE SCHOL-ARSHIP. \$2,000

Founded in 1908 by John Sprague, of Lowell.

THE GEORGE STEVENS BALLARD SCHOLARSHIP. \$2,000 Founded in 1910 by Caroline D. M. Ballard, of Augusta, Me.

THE RICHARD PERRY BUSH SCHOLARSHIP. \$2,000
Founded in 1910 by Mrs. Caroline M. Barnard, of Everett.

THE HANNAH S. MOULTON SCHOLARSHIPS. (4) \$10,150 Founded in 1914 by Hannah S. Moulton of Kensington, N. H.

THE BACON SCHOLARSHIP. \$2,500 Founded in 1915 by Mrs. Cyrus V. Bacon, of Hingham

THE James O. CURTIS SCHOLARSHIP. \$1,000
Founded in 1915 by Betsy B. Curtis, of Medford

THE TRUSTEE SCHOLARSHIPS.

A limited number of special scholarships of one hundred dollars each are available for needy students in the School of Liberal Arts who reside in college dormitories.

#### LOAN FUNDS

The College is enabled, through the generosity of certain benefactors, particularly through the gift of Dr. Ira Warren, to make loans in small amounts. It is the preference of the College to limit the loaning of money to the members of the Senior class. Applications should be made to the Chairman of the Scholarship Committee.

# ACADEMIC HONORS, PRIZE SCHOLARSHIPS, AND PRIZES

On the third Wednesday in November, the associated schools meet the several Faculties in Goddard Chapel in academic convocation. At this time public announcement is made of those who have been selected to represent the Senior class on the commencement platform, and of the recipients of prize scholarships and prizes.

The following Prize Scholarship Funds have been established and scholarships from the income are awarded under special conditions:

THE GREENWOOD PRIZE SCHOLARSHIP IN ORATORY. \$1,000
Founded in 1877 by Mrs. Eliza M. Greenwood, of Malden, and given to such student as shall have made, as the result of faithful work, together with at least a fair degree of attainment, the greatest improvement in Oratory.

The Wendell Phillips Memorial Scholarship. \$1,501

Founded in 1895 to perpetuate the name, fame, and influence of Wendell Phillips. This scholarship is to be awarded to a student who has completed the Freshman and Sophomore years, and he is to have the benefit of it during the remainder of his course. The beneficiary must be of sound body, high character, and ability in declamation and debate, and must comply with certain special conditions, including participation in a competitive debate of the applicants at the end of the Sophomore year. The specific conditions governing the award of this scholarship may be obtained by those intending to apply therefor from the Secretary of the Faculty, to whom appli-

this scholarship is at present seventy dollars.

THE MOSES TRUE BROWN SCHOLARSHIP. \$1,000

A scholarship founded in 1903 by Moses True Brown, of Sandusky,
Ohio, formerly Professor of Oratory in Tufts College, for encouraging
and assisting worthy students in the department of Oratory.

cation should be made early in the Sophomore year. The income of

THE PRIZE SCHOLARSHIP OF THE CLASS OF 1898.

The sum of fifty dollars is given annually by the Class of 1898 to that Senior who at the end of the Junior year shall have maintained the highest excellence in a course of study broadly and wisely chosen.

THE PRIZE SCHOLARSHIP OF THE CLASS OF 1882.

The sum of one hundred dollars is given annually by the class of 1882 to that member of the College who best exemplifies the combination of ability in athletics and excellence in scholarship.

The following prizes are awarded:

#### THE GODDARD PRIZES.

Three prizes of fifteen dollars each are assigned annually from the Goddard Prize Fund. In 1916–17 these prizes will be awarded in the departments of German, History and Physics, under the following conditions:

German.—A prize for the best examination on the dramatic works and theories of Lessing, by a member of the Junior or Senior class. The preparatory study will call for the reading, in addition to the plays covered in class, of Lessing's earlier dramas and assigned chapters of his "Hamburgische Dramaturgie,"

History.—A prize for the undergraduate student who shall show by his work in the department the most complete comprehension of the purposes of the courses in History and Public Law.

Physics.—The prize will be awarded to that student in either Physics 24-7 or 31-7 who, during the year, becomes most proficient in experimentation.

#### THE RHETORICAL PRIZES.

Three prizes are awarded as follows: A first prize of forty dollars, a second prize of thirty dollars, and a third prize of twenty dollars. The preliminary competition will be open to all candidates for the degree of A.B., B.S., and S.T.B. The rhetorical prizes are awarded by a committee, chosen by the Faculty, who judge the work presented by the competitors upon the public day appointed for that purpose. In order to enter the public competition, candidates, as well as their selections, must be approved by the Instructor in Oratory. A preliminary competition is held about ten days before the competition announced in the calendar, at which a committee of the Faculty determine the contestants in the final and public readings.

#### THE DE WITT C. TOMLINSON PRIZES.

Founded by Rev. Irving C. Tomlinson, of Brookline, Mass. Two prizes of thirty and twenty dollars respectively, for the two best essays on the subject of "The Ministry of Christ Jesus." The award of prizes must take into account (1) literary merit; (2) evidence of thorough study, clear insight, and unbiased understanding of the Biblical records of the ministry of Christ Jesus; (3) the treatment of the public and private ministration to those of his own time; (4) the treatment of the universal application of his ministry to all human needs, and (5) the treatment of the means by which the benefits of his ministry may be appropriated by his followers. These prizes are open to Seniors in The School of Liberal Arts, the Engineering School, the Theological School, and Jackson College, and to members of the Graduate School. Details as to conditions of competition may be obtained at the Registrar's office.

The foregoing prizes are not awarded, unless in the opinion of the respective judges there is sufficient merit in the several contests to warrant their distribution.

#### HONORS

Final Honors in the School of Liberal Arts and Jackson College may be conferred at Commencement upon any member of the graduating class who shall have attained Grade A in approved subjects aggregating not less than eighteen term hours in a major department, and an average of Grade B in eighteen hours of allied subjects. Subjects marked with an asterisk (\*) or with a double asterisk (\*\*) will not be counted for Honors. Final Honors will be conferred only upon recommendation of the head of the department in which Honors are desired.

HONORABLE MENTION IN THE SCHOOL OF LIBERAL ARTS AND JACKSON COLLEGE will be made, at Commencement, of any student who has attained, during the two years immediately preceding graduation, Grade A in nine term hours and not less than Grade B in three additional term hours of approved work in one department. Subjects marked in the Catalogue with an asterisk (\*) or with a double asterisk (\*\*) are under the conditions explained above as applying to Final Honors.

Candidates for Honorable Mention are expected to report to the Office on or before May 1 the department or departments in which they look for such distinction.

FINAL HONORS IN THE ENGINEERING SCHOOL will be conferred at Commencement upon any member of the graduating class who shall have attained credits in his major department aggregating not less than eighteen term hours of Grade A and nine term hours of Grade B.

Honorable Mention in the Engineering School will be made at Commencement of any student who has attained in any major department during the two years immediately preceding graduation, Grade A in nine term hours and not less than Grade B in six term hours.

\* Honors and Honorable Mention will be given in the five major departments in the Engineering School subject to the following conditions: 45-1, 45-2, and 45-12, Applied Mechanics, may be counted in all departments, and no subject in the curriculum of the Freshman and Sophomore years may be counted in any department. Save as specified above the subjects in the Civil Engineering department will include those numbered (41); in the Structural Engineering department, those numbered (51); in the Mechanical Engineering department, those numbered (61); and in the Chemical Engineering department, those numbered (35).

#### HOSPITAL

The College is the holder of a bed in the Somerville Hospital and its resident students in case of illness (except contagious diseases) are entitled to the benefits thereof without cost. Arrangements must be made through the college office.

#### INSURANCE

Arrangements may be made through the Bursar's office whereby students in any of the dormitories may insure their personal effects, including books, furniture, and wearing apparel. The cost of such insurance is fifty cents for \$100 per year.

#### COMMITTEE ON STUDENT EMPLOYMENT

It is the object of the committee on student employment to inform students concerning positions which may give regular occupation during available hours of term time, or which may be temporarily filled during the vacation periods. Students who wish to make application for any occupation should register their names, with a statement of their qualifications for any special work, with Professor H. H. CARROLL, Chairman of the Employment Committee, Bromfield-Pearson Building.

<sup>\*</sup>The classes of 1917 and 1918 will be governed by the regulations published in the Engineering Bulletin for 1916-17.

# Buildings and Equipment

#### LIBRARIES

The library building, erected through the gift of Mr. Andrew Carnegie, is called the Eaton Memorial Library, in honor of Charles Henry Eaton, '74, former pastor of the Church of the Divine Paternity, New York City.

In all, about seventy-five thousand bound volumes and sixty-seven thousand pamphlets are available for use. The College regularly receives more than two hundred periodicals. A reading-room, maintained by the students, supplies the daily and weekly papers. Separate rooms have been provided with facilities for the use of students working in the departments of History and Public Law, the Ancient Languages, the Modern Languages, Music, English, the Fine Arts, Philosophy, Political Science, Physics and Mathematics. The average annual increase by donation and purchase, for the last five years, has been about two thousand four hundred volumes.

In the general library is the collection of the Universalist Historical Society (six thousand volumes and several thousand pamphlets), to which, on application, students have access. In Packard Hall is a selected reference library, for the use of theological students. In the Barnum Museum is the department library of Natural History, numbering more than four thousand volumes and over ten thousand pamphlets. The Metcalf Musical Library is divided between the music rooms in Goddard Gymnasium, where the scores are kept, and the department room in the Eaton Memorial Library, which contains a collection of works relating to music. About four hundred representative musical compositions, in form for use upon the automatic instruments in the music rooms, are available to students.

The library building is open to all members of the College daily except Sundays and holidays, from 8.00 A.M. to 5.30 P.M.

#### BARNUM MUSEUM

The Barnum Museum of Natural History was built in 1883-84 by Phineas T. Barnum, who gave the College a fund for its maintenance and for additions.

The College is also indebted to Mr. Barnum for the larger portion of its zoological collection. This serves to illustrate all groups of the animal kingdom, and is especially rich in skeletons and mounted skins of mammals, the whole being well adapted for the purposes of instruction. The botanical collection consists of an herbarium containing a representation of the flora of New England, besides many specimens from Europe and the southern and western States. The geological collection has been selected with care and the mineralogical collection contains many fine examples.

The laboratories and lecture-rooms of the departments of Zoology, Botany and Geology are in the Museum building. The geological laboratory is provided with petrological microscopes, instruments for making rock sections, etc. The mineralogical laboratory possesses the apparatus necessary for the determination of minerals, the analysis of ores, and assay work. The biological laboratories for elementary work are furnished with all necessary facilities, while the laboratory for advanced and research work has all the appliances needed for investigation in anatomy, histology, and embryology.

#### GODDARD GYMNASIUM

Goddard Gymnasium, the gift of Mrs. Mary T. Goddard, is fitted with the apparatus usually seen in modern gymnasiums, including facilities for light and heavy gymnastics, fencing, wrestling, basket ball, base ball, and indoor athletic sports.

The third floor is occupied by the Department of Music.

#### ATHLETIC FIELD

Tufts College Athletic Field is the large inclosed field on College Avenue, where inter-collegiate contests are played. It includes a field house, two base-ball diamonds, a foot-ball field, and a quarter-mile, twenty-foot cinder track. Tennis-courts and a separate gymnasium are provided for women students.

#### CHEMICAL BUILDING

The building of the department of Chemistry contains laboratories for general inorganic, organic, analytical, and metallurgical chemistry, a large lecture-room, library, and weighing room, and the private laboratories of the professors in charge. The rooms are provided with modern laboratory conveniences, and are well supplied with apparatus and chemicals.

#### ROBINSON HALL

Robinson Hall, a memorial to Charles Robinson, is designed for the use of the Engineering School. It contains the laboratories for the Departments of Physics and Electricity and some of the laboratory equipment for the Departments of Civil and Mechanical Engineering. Beside these laboratories there are recitation rooms, a lecture hall and offices for the instructors and the Dean of the Engineering School. The drafting rooms for Civil and Structural Engineering are also in this building.

#### BROMFIELD-PEARSON BUILDING

The Bromfield-Pearson Building, built from funds given by Henry Bromfield Pearson, is largely used by the Department of Drawing and Mechanic Arts. It contains the library and offices of the Department of Mechanical Engineering.

#### ENGINEERING LABORATORIES

The engineering laboratories are supplied with power and light from a Harrisburg Standard engine directly coupled to a direct current General Electric generator.

The Civil Engineering Laboratories contain the Cement and Highway testing apparatus including abrasion machines for paving material and the machines for testing cement and other highway materials. The surveying apparatus includes a very complete and varied equipment of transits, levels, plane tables, sextants, compasses, and the usual auxiliary apparatus.

The Hydraulic Laboratory is equipped with a 600 gallon Worthington duplex steam pump, a 300 gallon Lawrence centrif-

ugal pump, steam pulsometer, Pelton water wheel and a Gould hydraulic ram. A 4500 gallon channel serves for supply and discharge from the several pumps and contains the weirs and necessary apparatus for the measurement of water.

In the Electrical Laboratories will be found the usual equipment of measuring instruments, dynamos, etc. required for courses in general electrical testing. While the greater part of this is standard apparatus certain of the most useful pieces were specially designed and constructed in the college shops by students in the electrical engineering course. A recent addition to the laboratories is a complete common battery telephone exchange consisting of a three position switch-board with the customary power plant and terminal room equipment. This apparatus is designed particularly for instruction purposes, but is also arranged to be representative of standard installation practice.

The Mechanical Engineering Laboratory equipment includes a Corliss engine with Admiralty condenser, a 15 Kilowatt Curtiss steam turbine and a variety of smaller engines, stationary and marine, of the plain slide valve, piston valve and riding cutoff valve types. There are gas and gasoline engines of from one to four cylinders representing a variety of makes. An automobile and motorcycle testing plant is also included in the equipment. Absorption and brake dynamometers are used for the measurement of power and other machines are provided for oil testing, compressed air and fan tests. The laboratory equipment for experimental mechanics includes testing machines from 10,000 to 150,000 capacity.

# SCHOOL OF LIBERAL ARTS

FRANK GEORGE WREN, A.M., Dean

# Standing Committees

CURRICULUM: Dean Wren, Chairman; Professors Durkee, Fay, Gray, and Schmidt.

PROMOTIONS: Dean Wren, Chairman; Professors Andrews, Denison, Durkee, and Reed.

# Faculty of the School of Liberal Arts

HERMON CAREY BUMPUS, Ph.D., Sc.D., LL.D., PRESIDENT

FRANK G. WREN, A.M., DEAN

Walker Professor of Mathematics

WILLIAM H. REED, A.M., RECORDING SECRETARY
Assistant Professor of Modern Languages

#### Professors

Arranged in the order of their service at Tufts College

CHARLES E. FAY, A.M., LITT.D.

Wade Professor of Modern Languages

FRANK W. DURKEE, A.M. Chemistry

LEO R. LEWIS, A.M.

History and Theory of Music

FRED D. LAMBERT, Ph.D.

Botany

WILLIAM K. DENISON, A.M.

Latin Language and Literature

\*HENRY C. METCALF, Ph.D.

Jackson Professor of Political Science

EDWIN C. BOLLES, Ph.D., D.D., LL.D.

Dickson Professor of English and American History

WILLIAM R. RANSOM, A.M.

Mathematics

ALFRED C. LANE, Ph.D., Sc.D.

Pearson Professor of Geology and Mineralogy

HENRY I. CUSHMAN, A.M., D.D.

Homiletics

HINCKLEY G. MITCHELL, D.D.

Hebrew and Old Testament Exegesis

ARTHUR I. ANDREWS, Ph.D. History and Public Law

KARL SCHMIDT, Ph.D.

Philosophy and Education

LEE S. McCOLLESTER, S.T.D.

Packard Professor of Christian Theology

<sup>\*</sup> On leave of absence.

HERBERT V. NEAL, Ph.D. Zoology

CLARENCE R. SKINNER, A.M. Applied Christianity

CHARLES H. GRAY, Ph.D. English

#### Assistant Professors

Arranged in the order of their service at Tufts College

ALEXANDER DILLINGHAM, A.M.

Mathematics

ALBERT H. GILMER, A.M. English

HENRY H. MARVIN, Ph.D.

Physics

EUGENE H. BABBITT, A.B. Modern Languages

RALPH B. WILSON, A.M.

Political Science

WILLIAM F. WYATT, Ph.D.

Greek

## Instructors

CROSBY F. BAKER, M.S. Chemistry

LOUIS R. BURNETT, M.D.

Physical Education

JOSEPH CHANDLER, Ph.D. Organic Chemistry

JOHN L. C. KEEGEN, A.M. English

NATHANIEL H. KNIGHT, B.S. *Physics* 

FRANK W. POTE, B.S. *Physics* 

AUGUSTE L. POULEUR, M.S. Chemistry

HARRIS RICE, S.B.
Walker Special Instructor in Mathematics

LLOYD P. RICE, A.M. Political Science

EDWIN A. SHAW, M.S. Education

CARL W. STAPLES, B.S. Chemistry

# Courses of Instruction

In order that the student may pursue studies that are properly correlated and are at the same time adapted to his individual needs and attainments, he is first assigned to a member of the Faculty who acts during the Freshman year as his adviser. The adviser, having ascertained the qualifications and the ambitions of the student, explains to him the several courses of study. The student, prior to May 15, selects as his major department the one in which he plans to do the greater amount of his work. The major instructor of that department acts as the student's adviser during the remainder of his course. The Committee on Promotions has final authority over all plans of study. There are at the present time twelve major departments, each having major instructors as follows:

Biology		٠	۰								Professor Lambert or Ne
Chemistry	y		•/								Professor Durkee
English											Professor Gray
French								٠	٠		Professor Fay
German											Professor Fay
Greek .			٠			٠					Professor Wyatt
History a	ınd	1 1	Pu	bli	ic	La	w				Professor Andrews
Latin .	٠			٠		٠				۰	Professor Denison
Mathema	tic	cs									Professor Wren

Major Instructor

Professor Schmidt Professor Marvin

Professor Metcalf

eal

## The courses offered are as follows:

Political Science . . .

Philosophy and Education . . . .

Physics . . . . . . . . . . . .

Department

- I. A general course, leading to the degree of Bachelor of Arts or Bachelor of Science.
- II. A course leading to the degree of Bachelor of Science in Chemistry.

# GENERAL COURSE LEADING TO THE DEGREE OF BACHELOR OF ARTS OR BACHELOR OF SCIENCE

Required of All Students	
	Hours *
English	6
Mathematics	
Biology, Chemistry, or Physics	6
Physical Education	2
French, or German, of which at least six hours	
shall be above intermediate grade.	

Candidates for A.B. must also complete six hours in Greek or Latin.

#### Majors and Minors

Each candidate for a bachelor's degree must have completed a major in one of the following groups and a minor in each of the two other groups. The purpose of this requirement is that each student shall do a considerable amount of work in one group of studies and at the same time have a reasonable amount of training in the two other groups.

Group 1	Group 2	Group 3
English French German Greek Latin	Biology Chemistry Mathematics Physics	History and Public Law Philosophy and Education Political Science

Geology or Mineralogy may be included as a part of the major or minor in an allied science.

A major consists of not less than eighteen hours' work in a single department, but certain subjects, particularly those that are introductory, do not have major value, and, therefore, cannot be counted in composing the eighteen-hour requirement. In the following description such subjects are marked with an asterisk (\*) or double asterisk (\*\*).

A minor consists of not less than twelve hours' work in a single department, and may include introductory subjects but a subject marked with a double asterisk (\*\*\*) cannot be counted in composing the twelve-hour requirement.

<sup>\*</sup>Each department offers a series of subjects for study. The unit indicating the requirements is the hour, which represents a subject pursued one hour a week for a term or one half-year. Thus a subject calling for three hours a week for one term represents a requirement of three hours; if it calls for three hours a week for one year, or two terms, the requirement in that subject is six hours.

The regular Freshman program is as follows:

For A.B.		For B.S.			
F	lours		Hours		
English	6	English	6		
Mathematics	6	Mathematics	6		
Biology, Chemistry, or Physics	6	Biology, Chemistry, or Physics	6		
Greek or Latin	6	French or German	6		
Elective	6	Elective	6		
Physical Education	I	Physical Education	1		

The Elective of the Freshman year may be chosen from one of the following departments:

Biology	Greek
Chemistry	History
English	Latin
French	Physics
German	Political Science

Students who desire to begin preparation for a definite vocation may arrange continuous courses of study leading to the degree of A.B. and B.S. which will combine special fitness for a chosen field with the general training that every educated man should have.

Those preparing for definite vocations or professions should select major subjects as follows:

Vocation			Major Subjects	
Business			Political Science	
Consular and I	Foreign S	Service .	History and Public Lav	V
Forestry			Biology	
Journalism .			English	
Law			History and Public Lav	N
Medicine			Biology	

Those desiring to teach should select as a major the subject in which they intend to specialize and should confer with the Department of Education.

# II. COURSE LEADING TO THE DEGREE OF BACHELOR OF SCIENCE IN CHEMISTRY

The following subjects have been selected and arranged to prepare students for positions in metallurgical laboratories, as chemists with manufacturers or in analytical laboratories, or as assistant chemists for immediate service in the various departments of the United States government. This course may be followed also by those who wish to teach or to do graduate work in Chemistry.

FRESHMA	N YEAR
First Term	Second Term
Hours	Hours
English 1 3	English 2
Mathematics 14-21 2	Mathematics 14-21 2
Graphics 21-21	Graphics 21-21
Physics 1 3	Physics 1 3
German	German
Chemistry 1 3	Chemistry 1
SOPHOMO	DE VEAD
FIRST TERM	SECOND TERM
Hours	Hours
German	German
Chemistry 35-2 2	Chemistry 35-3
Chemistry 4	Chemistry 4
Physics 21 2	Physics 21
Physics Laboratory 24-7	Physics Laboratory 24-7 2
Electives	Electives
Mathematics	Mathematics
English	English
Biology	Biology
Elisa gy	Diology
JUNIOR	YEAR
FIRST TERM	SECOND TERM
Hours	Hours
Chemistry 5	Chemistry 5 3
Chemistry 9	Chemistry 7
Chemistry 35-10 4	Chemistry 35-10
Political Science 1 3	Political Science 1 3
Mineralogy 1 3	
Electives	Electives
German	German
English	English
Mathematics	Mathematics
History I	History I
Biology	Biology
	Crystallography
SENIOR	VEAD
FIRST TERM	SECOND TERM
Hours	Hours
Chemistry 11	Chemistry 11
Chemistry 17	Chemistry 17
Thesis	Thesis
Geology 5 3	Geology 23 I
	Geology 24 2
	Geology 24
Electives	Electives
Biology	Biology
Chemistry 12.	Chemistry 12
Political Science	Political Science
Dynamo-Electric Machinery	

## SYNOPSIS OF THE REQUIREMENTS FOR GRADUATION

- (1) The requirement for the degree of Bachelor of Arts or Bachelor of Science is the satisfactory completion of subjects aggregating one hundred twenty-two term hours, including physical education.
- (2) Students are required to attain for graduation a grade of at least C in seventy-two term hours.
- (3) Upon the satisfactory completion of the aggregate hour requirement, the student is entitled to receive the Bachelor's degree, but no student will be granted a degree in less than four years of residence, unless he shall have obtained grade B as an average for his entire work.

#### ORDER OF THE DEPARTMENTS

The order of the departments of instruction as printed in this catalogue is as follows:

- 12 English 22 German 32 French 42 Italian 52 Latin 62 Greek 92 Spanish
- 14 Mathematics 24 Physics 34 Chemistry 44 Biology 54 Geology 64 Mineralogy
- 16 Philosophy 26 Education 36 History 46 Public Law and Administration 66 Political Science
- 18 Oratory 28 Classical Archæology 38 Music 88 Physical Education

# Departments of Instruction in the School of Liberal Arts

In the following description of subjects, the department and name of the officer in charge are first given; then the several subjects, with the introductory subjects first. Each department has its fixed number and each subject its symbol. When subjects do not continue through the year, (F) means that they occur in the first term and (s) means that they occur in the second. Unless otherwise indicated, instruction in each subject is given three times each week and the credit is three term-hours per half-year. Subjects enclosed in brackets are not offered during the current year. An asterisk (\*) indicates that the subject cannot be counted in comprising the eighteen-hour requirement for a major. A double asterisk (\*\*) indicates that the subject cannot be counted in comprising either the eighteen-hour requirement for a major or the twelvehour requirement for a minor. If fewer than four students apply for an announced subject the subject may be omitted.

#### 12 ENGLISH

#### PROFESSOR GRAY

\*\*12-1. (F) Freshman Composition. The essentials of composition, with practice in the forms of discourse, chiefly exposition and argumentation. Text-book, lectures, themes, conferences, and library reading. Required in all courses.

Professor Gray and Mr. Keegen; in Jackson College, Professor Davies

\*\*12-2. (s) Freshman Composition continued. Further practice in the forms of discourse, chiefly narration and description. Text-book, lectures, collateral reading, themes, and conferences. Required in all courses. PROFESSOR GRAY and Mr. KEEGEN; in Jackson College, PROFESSOR DAVIES.

12-4. (s) Advanced Composition. Study of journalism and practice in newspaper writing. Text-book, analysis of the leading American newspapers, preparation of special articles, and conferences.

ASSISTANT PROFESSOR GILMER

English 4 is open to those who have obtained at least grade C in English 1 and 2.

- [12-7. (s) The Forms of English Poetry. English versification, followed by the study of the chief forms of English poetry for both technique and content. Text-book, lectures, illustrative reading, and simple composition

  PROFESSOR GRAY
- 12-10. The English Bible as Literature. A study (1) of its various literary forms—narrative, poetry, story, drama, address; (2) of its backgrounds in government, history, geography, and social customs; (3) of the influence of Biblical Literature on all forms of English Literature.

PROFESSOR McCollester

12-11. General View of English Literature. Historical outline of the development of English Literature and reading of representative masterpieces. Text-book, lectures, book of selections, and reading reports.

PROFESSOR GRAY

Students majoring in English are required to take 12-11 or 12-12, early in their course.

- 12-12. American Literature. A general survey of American literature, aiming to make clear the characteristics of the most important literary periods, the writers, and their works. Text-book, lectures, reading, and essays.

  Assistant Professor Gilmer
- 12-13. (s) American Literature. A study of a group of representative authors: Hawthorne, Poe, Holmes, Lowell, and Thoreau. Reading, lectures, essays, and discussions.

  Mr. Keegen

12-11 or 12-12 must precede 12-13.

- [12-16. Milton and his Time. Lectures, readings, and brief critical essays. Professor Gray]
- 12-17. (F) Shakespeare. A study of the life and times of Shakespeare, and of his development as a dramatist, illustrated by reading a series of selected plays.

  Assistant Professor Gilmer
  - 12-18. (s) Shakespeare. Critical reading of a few plays not included in 12-17, with special attention to text and problems of research. Lectures, quizzes, investigation, and reports.

    Professor Gray

[12-19. The Age of Chaucer. Study of forms and pronunciation, reading of selections from Chaucer and his contemporaries, and lectures on the historical and social background of their works. PROFESSOR GRAY]

12-23. (F) The Short Story. Narrative composition based mainly upon the study of the short story. Analysis of the principles of structure, practice-writing, and criticism of original manuscripts in class.

ASSISTANT PROFESSOR GILMER

12-24. (F) Poetry of the Nineteenth Century. Wordsworth, Coleridge. Scott, Byron, Shelley, Keats, Rossetti, Tennyson, and the Brownings, Lectures, reading, library work, and reports.

PROFESSOR GRAY

r2-25. Development of the Drama. A comprehensive study of the growth of the drama from its origin in Greece to plays of to-day. Many specimens of dramatic literature, Greek, Roman, English, and American, are read, summarized, and criticised in relation to dramatic principles.

ASSISTANT PROFESSOR GILMER

12-29. (s) Seminar. Origin of the English Novel and its development to the nineteenth century. (F) The English Novel of the nineteenth century.

PROFESSOR GRAY

[12-34. Tennyson and Browning.

Professor Gray]

12-36., (s) Prose of the Nineteenth Century. Lamb, De Quincey, Newman, Landor, Ruskin, Carlyle. Lectures, reading, library work, and reports.

PROFESSOR GRAY

#### 22 GERMAN

### PROFESSOR FAY

\*\*22-1. Elementary German. The essentials of grammar, with composition. Reading of simple modern prose.

Assistant Professors Reed and Babbitt

German 1 is the equivalent of the entrance requirement in Elementary German.

\*22-2. Intermediate German. Reading of modern prose, lyrics and ballads; review of grammatical principles; practice in writing German.

ASSISTANT PROFESSOR REED

German 2 is open to entering students who have presented Elementary German for admission.

22-3. Course in advanced reading. Selected works from the literature of the eighteenth and nineteenth centuries.

ASSISTANT PROFESSORS REED and BABBITT

German 3 is open to entering students who have presented Intermediate German for admission. Either half-year may be taken as a half-subject.

22-3A. German Composition, written and oral. One hour a week.

Assistant Professor Reed

German 3A is open to students who are at the same time taking German 3 or 4. It is not open to those who have taken or are taking German 3B.

22-3B. German Composition, written and oral.

ASSISTANT PROFESSOR REED

German 3B is open to students who have satisfactorily passed German 3 or its equivalent.

22-4. Schiller and Goethe. Maria Stuart, Wallenstein; Egmont, and selections from prose works of Goethe. Collateral reading. Dictation.

PROFESSOR FAY

German 4 is open to entering students who have presented Advanced German for admission. Juniors and Seniors whose major department is German may be permitted to take 4 and 5 in the same year.

- 22-5. Advanced reading in Lessing and Goethe. Nathan der Weise, Emilia Galotti, Laokoön, Goetz von Berlichingen, Tasso, Iphigenie, Faust, Parts I and II, with collateral reading.

  PROFESSOR FAY
- 22-6. History of German Literature, with illustrative works for leading epochs. Middle High German: Bachmann, Mittelhochdeutsches Lesebuch.

PROFESSOR FAY

#### 32 FRENCH

### PROFESSOR FAY

\*\*32-1. Elementary French. The essentials of grammar, with composition, and the reading of short works of modern authors in prose and verse.

Assistant Professor Babbitt

French I is the equivalent of the entrance requirement in Elementary French.

- 32-1A. Tone-Production and Phonetics with application to the French language.

  Miss Bruce
- \*32-2. Intermediate French. Review of grammatical principles, especially with reference to syntax; exercise in composition; vocabulary practice; reading of modern fiction and drama, such as Mérimée's Colomba and Sandeau's Mademoiselle de la Seiglière.

PROFESSOR LEWIS and ASSISTANT PROFESSOR BABBITT

French 2 is open to entering students who have presented Elementary French for admission.

32-3. Reading of modern authors (Taine or de Vigny, and novelists); introduction to seventeenth-century classics (Corneille, Racine, Molière,

Boileau). Review of grammatical principles, with advanced vocabulary practice.

Professor Lewis

French 3 is open to entering students who have presented Intermediate French for admission. Either half-year may be taken as a half-subject.

32-3B. French Composition. Translation from the English (Fontaine's Prose Composition); later from the German, the work being based on Ploetz' Nouvelle Grammaire Française and Uebungen zur Französischen Syntax.

PROFESSOR FAY

French 3B is open to students who have completed French 3, or its equivalent, and at least one course in German.

32-4. Literature and Manners of the Seventeenth Century. Crane's Société Française au XVIIe Siècle; Molière, Le Misanthrope, Les Précieuses Ridicules, Les Femmes Savantes; Boileau, Les Héros de Roman; Warren's French Prose of the Seventeenth Century, and selections from modern critics.

PROFESSOR FAY

French 4 is open to entering students who have presented Advanced French for admission. Juniors and Seniors whose major department is French may be permitted to take 4 and 5 in the same year.

- 32-5. Literature of the Eighteenth and Nineteenth Centuries. The drama, poetry, the novel, the philosophical essay and criticism. Either half-year may be taken as a half-subject.

  PROFESSOR LEWIS
- [32-6. Historical Grammar. Old French readings: Chanson de Roland, Villehardouin, Joinville. History of French Literature. Detailed study of sixteenth century, with illustrative texts.

  PROFESSOR FAY]

#### 42 ITALIAN

#### PROFESSOR FAY

42-1. Grandgent's Grammar and Composition; Bergen's Italian Reader; Maffei, Merope; Dante, Divina Commedia (Scartazzini's edition).

PROFESSOR FAY

The above subject alternates with 92-1 Spanish. These subjects are open to candidates for A.B. who have done satisfactory work in French above intermediate grade.

#### 52 LATIN

#### PROFESSOR DENISON

\*52-1. Cicero, Selections from the Letters or De Amicitia; Livy; Selections of Latin Verse from the earliest period to the late writers, including examples of Latin Hymns. The object aimed at in the second part of the course is to give to those who may not pursue Latin further a general conception of the best Latin verse, and to others a sound basis for more detailed

study of certain Latin poets. Literary values will be considered, and some practical aspects of Latin study will be emphasized. Professor Denison

Latin 1 is introductory to all later subjects.

52-2. Pliny, selected letters; Horace, Odes; Terence, one play; Apuleius, Story of Cupid and Psyche; Petronius, Cena Trimalchionis. This subject introduces the student to the early drama and also to the authors of the Silver Age, and in addition affords opportunity for the detailed study of the Odes of the Augustan poet, Horace.

PROFESSOR DENISON

Latin 2 is open to students who have completed Latin 1.

52-3. Oxford Selection of Latin Verse, or selections from the Satires of Juvenal and Epigrams of Martial; Cicero; Tacitus; reading at sight.

PROFESSOR DENISON

[52-4. Horace, Satires and Epistles; Plautus, one or more plays; Cicero, selected letters; reading at sight.

PROFESSOR DENISON

Subjects 3 and 4 will be given in alternate years, and are designed for those who have completed Latin 2, or its equivalent. They may, by special arrangement with the instructor, be taken as half-subjects in either term

- 52-5. Latin Composition. This course may accompany Latin 1 or be taken later in connection with other subjects offered by the department.

  One hour a week.

  PROFESSOR DENISON
- 52-6. Latin Composition. Latin 6 is open only to students who have completed Latin 5. In it particular attention is paid to idiom and style. By reason of the variation of the work from year to year, the subject may be taken a second time with due credit. One hour a week. PROFESSOR DENISON

NOTE: —The attention of Greek and Latin students is called to related subjects listed under Classical History and Archæology.

#### 62 GREEK

# Assistant Professor Wyatt

\*62-1. Elementary. Goodwin's Grammar; Xenophon, Anabasis; Homer.

Assistant Professor Wyatt

Greek 1 is intended for students entering without Greek and wishing to begin the study of that language. It is assumed that their previous training in linguistic studies will enable them to proceed rapidly and accomplish in one year all the work usually done in preparation for college. This subject may be taken (without credit) as a normal course by advanced students, on consultation with the instructor. *Double course*, six hours a week.

62-2. Xenophon, Memorabilia; Homer, Odyssey; Euripides, one play.

Assistant Professor Wyatt

Greek 2 is for students who have passed Greek 1, or the entrance requirements in advanced Greek.

62-3. Herodotus, Books VII and VIII; Æschylus, The Persians; Sophocles, Antigone; Euripides, Alcestis; Plato, Apology, Protagoras.

ASSISTANT PROFESSOR WYATT

[62-4. Lyric and Elegiac Poets, to Pindar. Aristophanes: Clouds, Birds, Acharnians, Frogs, with study of social life in Athens in the fifth century B. C. ASSISTANT PROFESSOR WYATT]

[62-5. Theocritus, Idyls, with study of the Alexandrine age; Lucian; Homer, the Iliad, or the Odyssey, entire, with lectures on the results of the more recent investigations of the Homeric question.

ASSISTANT PROFESSOR WYATT]

Subjects 4 and 5 will be given in alternate years, and are designed for those who have completed Greek 3 or its equivalent. They may, by arrangement with the instructor, be taken as half-subjects in either term.

Note: —The authors and works enumerated under courses 2, 3 and 4 are not necessarily repeated each year, but are intended to give a general idea of the aim and scope of the courses.

**62-6.** Greek Composition; practice in sight reading. One hour a week.

Assistant Professor Wyatt

Greek 6 may be taken by anyone who has had the equivalent of Greek 1.

[62-7. Greek Composition; reading at sight. One hour a week.

ASSISTANT PROFESSOR WYATT]

Greek 7 is open only to students who have completed Greek 6.

Note: — No student can be recommended as a teacher of Greek who has not taken at least one subject in Greek composition.

### 92 SPANISH

# Assistant Professor Reed

[92-1. Elements of Spanish Grammar, practice in writing Spanish, reading of standard texts, including selections from the Don Quijote of Cervantes.

ASSISTANT PROFESSOR REED]

The above subject alternates with 42-1 Italian. These subjects are open to candidates for A.B. who have done satisfactory work in French above intermediate grade.

### 14 MATHEMATICS

# Professor Wren

14-21. Introductory course. Rounded numbers, trigonometric functions, 4-place logarithms, right triangles. Graphical representation of functions, typical variables. Rectangular coördinates, straight lines, standard curves. Elementary derivatives, rate problems, extreme values. Simple integrals, areas. This subject and 21-21 Graphics described below are prescribed

for all students and satisfy the requirement of Mathematics for the Bachelor's degree, in the School of Liberal Arts and Jackson College. Four term-hours. PROFESSOR RANSOM, ASSISTANT PROFESSOR DILLINGHAM and MR. H. RICE

21-21 Graphics. Introductory Course. A general consideration of the principles and usages of the graphic language, including practice in the reading of a variety of drawings, and such training in the art of graphic expression as may be possible without the usual equipment necessary to instrumental work. One two-hour period a week. Counting as two term-hours.

PROFESSOR ANTHONY and ASSISTANT PROFESSOR ASHLEY

- 14-4. (F) Analytic Geometry. Coördinate systems. Properties of conic sections and higher plane curves. Introduction to three dimensional geometry.

  PROFESSOR RANSOM
- 14-5. (s) Elements of Calculus. Differentiation and integration of the elementary forms of algebraic and transcendental functions with simple applications.
  PROFESSOR RANSOM
- 14-6. (F) Differential and Integral Calculus. A continuation of course 5, involving application to mechanics and to the theory of plane curves, the determination of lengths, areas and volumes.

## ASSISTANT PROFESSOR DILLINGHAM

- 14-7. (s) Advanced Calculus. A more critical examination of fundamental methods and their extension to complex quantities. Partial differentiation, line and surface integrals, and the more notable definite integrals.

  Professor Ransom
- 14-8. (S) Modern Geometry. An advanced course in Plane Analytic Geometry involving analysis by means of homogeneous coördinates, interpreting imaginary and infinite elements, and introducing the elementary geometric transformations.

  Assistant Professor Dillingham
- 14-9. (F) Theory of Equations and Determinants. Transformation of equations; cubic and quartic equations; applications of substitution groups; classification of linear simultaneous equations; properties of determinants.

  Assistant Professor Dillingham
- 14-10. (s) Differential Equations. A problem course in the elementary theory of ordinary and partial differential equations with applications to geometry and mechanics.
  PROFESSOR WREN
- 14-12. (F) Vector Analysis. Sums and products; differential operators; applications to geometry, electricity, and dynamics. PROFESSOR RANSOM

Mathematics 12 is open to students who have completed Mathematics 14-21, 4, 5, and 6.

14-14. (F) Theoretical Mechanics. A problem course dealing mainly with dynamics of a particle, and dynamics of a rigid body. Lectures and ecitations. Mathematics 6 and 10 must precede.

ASSISTANT PROFESSOR MARVIN

14-22. (For s) Algebra, geometry, and trigonometry. Parts of these ubjects will be selected with especial reference to the needs of those ntending to teach.

PROFESSOR RANSOM

Not open to Freshmen.

### 24 PHYSICS

# ASSISTANT PROFESSOR MARVIN

\*24-1. General Physics. A course of lectures, recitations and laboratory work. It is to be elected by students who choose Physics as their rescribed science and who have presented Physics for admission. Two sectures or recitations and one three-hour laboratory period per week.

ASSISTANT PROFESSOR MARVIN and MR. KNIGHT

Must be preceded or accompanied by Mathematics 14-21.

- 24-20. General Physics. A course of lectures, recitations and laboratory work intended to acquaint the student with the fundamental principles of Physics. This subject is to be elected by students who have not preented Physics for admission. Three lectures or recitations and one three-our laboratory period. Assistant Professor Marvin and Mr. Knight
- **24-21.** General Physics. Problem Course. This course is a continuation f, and must be preceded by Physics 1. Two recitations per week. Counting as four term hours.

  Mr. POTE
- 24-7. Physics Laboratory. A laboratory course in General Physics inended to follow Physics 1. One three-hour period per week. Counting as we term hours.
- 24-2. (F) Electricity and Magnetism. Mathematical Theory. Lectures and recitations. Mathematics 5 must precede.

ASSISTANT PROFESSOR MARVIN

- 24-6. (s) Wave Motion and Light. A brief treatment of geometrical ptics is followed by a discussion of reflection, refraction, diffraction, interprence, polarization, double refraction, emission and absorption from the andpoint of the wave theory. Lectures and recitations. Mathematics 5 ust precede.

  Assistant Professor Marvin
- 24-9. (s) Theory of Heat. A discussion of the classical experiments f Regnault, Joule and others, is followed by an introduction to the Kinetic heory and Thermodynamics, and a discussion of recent developments the field of Radiation. Lectures and recitations. Given in 1916–17. Sathematics 5 must precede.

  MR. POTE

- 24-II. (F) Conduction of Electricity through Gases, and Radioactivity. Lectures and recitations, with collateral reading. Reports on original papers appearing in the literature of the subject are required from time to time. Mathematics 5 must precede.

  MR. POTE
- 24-17. Advanced Physics Laboratory. A course intended to accompany Physics 2, 6, 9 or 11. Open to Juniors and Seniors whose major department is Physics, and to other Juniors and Seniors whose qualifications are satisfactory to the head of the department. The course may be pursued for one, two, three or four terms, subject to the approval of the head of the department. One three hour period per week. Counting as one to four term hours, according to the number of terms in which it is pursued.

Assistant Professor Marvin and Mr. Pote

Mathematics 14 may be counted towards a major in Physics.

# 34 CHEMISTRY

# PROFESSOR DURKEE

\*34-1. General Chemistry. A course in theoretical and descriptive inorganic chemistry, with a thorough consideration of the simplest carbon compounds and principal technical processes. This subject is to be elected by those who have presented Chemistry for admission. Two lectures, and one three-hour laboratory period. Counting as six term hours.

PROFESSOR DURKEE, Mr. BAKER, Dr. CHANDLER, and Mr. POULEUR

34-20. General Chemistry. An introductory course in theoretical and descriptive inorganic chemistry, with a thorough consideration of the simplest carbon compounds and principal chemical processes. This subject is to be elected by those who have not presented Chemistry for admission. Three lectures or recitations, and one three-hour laboratory period.

PROFESSOR DURKEE, MR. BAKER, DR. CHANDLER, and Mr. POULEUR

35-2. (F) Qualitative Analysis for the detection of the metals, a course which includes the experimental development of schemes for the division of the metals into groups, the separation and detection of the metals in each group,—a study of all the chemical changes and analytical details, together with the correct analysis of six known solutions and thirteen unknown. Lectures, laboratory work and recitations. Two three-hour periods.

Counting as two term hours.

PROFESSOR DURKEE, MR. BAKER, and ASSISTANTS

35-3. (s) Qualitative Analysis. Advanced, dealing with methods to effect solution of solids, the detection of mineral and common organic acids, the complete analysis of inorganic solids, including mixtures of salts, minerals, alloys, and slags. Three known and thirteen unknown are required, and thorough study of the chemical changes and conditions involved in the analyses. Lectures, laboratory work, and recitations. Two three-hour periods. Counting as two term hours.

MR. BAKER and ASSISTANT

34-22. Qualitative Analysis. A more extended treatment than that given in 35-2 and 35-3. Preparation 34-1. Open to all who are not engineering, or B.S. in chemistry students. Lectures, recitations, and laboratory work. Three three-hour periods. Counting as six term hours.

PROFESSOR DURKEE and MR. BAKER

34-4. Quantitative Analysis. Theory and practice of gravimetric and volumetric analysis, including the determination of chlorine by the ordinary and Gooch crucible methods, iron and sulphur in furous ammonium sulphate, silica in a silicate, phosphorus in a phosphate, complete analysis of dolomite, and brass, preparation of strictly half-normal sodium hydroxide and hydrochloric acid solutions, the volumetric analyses of soda ash and oxalic acid, the analysis of iron ore by the dichromate and permanganate methods, determination of chromium in chromite, of antimony by the iodine method, and silver by the sulphocyanate method. Lectures and laboratory work. Three three-hour periods. Counting as six term hours.

PROFESSOR DURKEE and Mr. BAKER

- 34-5. Quantitative Analysis. Technical. Work varied somewhat to meet the needs of individual students. Course ordinarily comprises proximate analysis of coal, nitrogen in coal, by Kjeldahl's method, complete analysis of boiler scale, mineral and sanitary analysis of water, determination of copper in ores by iodine aud cyanide methods, of zinc by ferro-cyanide method, complete analysis of Babbitt metal, determination of lead in ores, and manganese, sulphur, phosphorus, silicon and carbon in iron and steel. Organic analysis. Laboratory work. Three three-hour periods. Counting as six term hours.
- 34-7. (s) Fire Assay. A course which deals with the theory and practice of sampling and assaying gold and silver ores. Open to students who have taken 1, 2, 3, and 4. Two three-hour periods. Counting as two term hours.

  PROFESSOR DURKEE and MR. POULEUR
- 34-8. (s) MetaHurgy of Iron and Steel, considered largely from the chemical side and includes the study of ores, fluxes, fuels, furnaces, and the other mechanical devices used in the commercial production of pig iron, wrought iron, and steel, together with the solution theory of iron and steel, heat treatment of steel, and production of malleable cast iron. Metallurgy of Gold and Silver is an alternative. Lectures, recitations, and laboratory work. Chemistry 8 is open to students who have taken Chemistry 1. Two lectures a week. Counting as two term hours.

  MR. BAKER
- 34-9. (F) Gas Analysis, by the Orsat, Elliot, and Hempel systems. Lectures and laboratory work. Chemistry 9 is open to students who have taken Chemistry 1, 2, 3, and 4. One three-hour period. Counting as one term hour.

  PROFESSOR DURKEE and MR. POULEUR

- 35-10. Organic Chemistry. This course consists of lectures, recitations, and laboratory work. It is intended to familiarize the student with the typical compounds of carbon and their more important derivatives. The work in the laboratory includes the preparation of certain of the more important substances referred to in the lectures, and the identification of certain classes of compounds. Lectures, recitations, and laboratory work. Chemistry 10 is open to students who have taken Chemistry 1. Three lectures and one three-hour laboratory period. Counting as eight term hours.

  DR. CHANDLER and ASSISTANT
- 34-II. Physical Chemistry. The subject matter of this course consists largely of the principles usually included under the head of Physical Chemistry. The work in the laboratory consists of physical chemical measurements and experiments of a physical chemical nature. Lectures, recitations, and laboratory work. Chemistry II is open to students who have taken Chemistry I, 2, and 4. Two lectures and one three-hour laboratory period. Counting as six term hours.

  DR. CHANDLER
- 34-12. (F) Discussion of Chemical Subjects and Recent Investigations.

  One hour a week.

  PROFESSOR DURKEE and DR. CHANDLER
- 34-17. Applied Chemistry. A course dealing with the most important applications of inorganic and organic chemistry to manufacturing purposes, such as the production of sulphuric acid, soda, illuminating gas, and sugar. Lectures, visits to plants, text-book work, and recitations. Two lectures or recitations and one three-hour laboratory period. Counting as six term hours.

  PROFESSOR DURKER
- 34-16. Thesis. Investigation of a problem in Inorganic, Organic, or Technical Chemistry. Open to students of A.B. and Science Courses who have satisfactorily completed Chemistry 1, 2, 3, 4, 5, and 10. *Nine laboratory hours a week. Counting as six term hours.*

# PROFESSOR DURKEE and Dr. CHANDLER

34-19. (F) Chemistry. This course is primarily intended to enable the students to acquire facility in reading chemical German. The work consists of recitations and special reports on assigned subjects. These assignments are chiefly to articles in the German chemical journals. Open to Juniors and Seniors, candidates for A.B. or B.S., taking chemistry as a major subject, who have had not less than two years of college German or its equivalent.

Dr. Chandler

### 44 BIOLOGY

# PROFESSORS NEAL AND LAMBERT

\*44-1. General Biology. A course in the principles of animal and plant biology, presenting the fundamental facts of vital structure and function with special emphasis upon the vertebrates and flowering plants. Some

conception of the evolution of plants and animals is given by the laboratory study of a series of types beginning with the unicellular. The student is advised to take field work in ornithology (Biology 13) in conjunction with Biology I. Two recitations and three hours of laboratory work. Counting as six term hours.

PROFESSORS NEAL and LAMBERT

- 44-3. Vertebrate Morphology. A course in the phylogeny of man and mammals. The laboratory work consists largely of the dissection of the dogfish and cat. Each organ system is studied with reference to its development, anatomy and physiology. Open to all students who have completed Biology 1. Two lectures or recitations and three hours of laboratory work. Counting as six term hours.

  PROFESSOR NEAL
- 44-4m. (s) Human and Comparative Physiology. Lectures, recitations, conferences, and laboratory work. Given at the Medical School. *Hours and credit to be arranged*.

  DR. RYAN
- 44-5m. (F) Histology, Medical. Lectures, quizzes, and laboratory work given at the Medical School. *Hours and credit to be arranged*.

PROFESSOR BATES

- 44-7. Botany. Lectures and laboratory work. An advanced course in plant morphology and physiology, open to students who have taken Biology I. Two lectures and three hours of laboratory work. Counting as six term hours.

  PROFESSOR LAMBERT
- 44-8. Special Work. The investigation of some problem. Open to those who have taken three courses in biology. *Hours and credits to be arranged.*PROFESSORS NEAL and LAMBERT
- 44-9m. (F) Human Anatomy. Lectures, quizzes, and dissection. Given at the Medical School. Hours and credit to be arranged. DR. SULLIVAN
- 44-11. Microscopical Technique. A laboratory course designed to introduce the student to the methods used in the preparation of plant and animal tissues for the microscope. Open to students who have completed Biology 3 or 7. Six hours of laboratory work. Counting as four term hours.

  PROFESSOR LAMBERT
- 44-12. Theoretical Biology. A reference reading and thesis course designed to introduce the student to some of the more important literature dealing with the scientific and philosophical problem of man's place in nature. A thesis based upon reference reading and dealing with the problem of the physical and mental evolution of man is required. Open to Seniors and Juniors but may not be offered as a part of the science requirement for a degree. One lecture, one conference hour and four hours of reference reading. Counting as six term hours.

  PROFESSOR NEAL

44-13. (s) Ornithology. A field and laboratory course in the study of our native birds. To be taken in conjunction with Biology 1. One three hour laboratory period or field trip a week. Counting as one term hour.

PROFESSOR NEAL

# 54 GEOLOGY

### PROFESSOR LANE

54-1. (s) Physical Geology and Geography. Primarily intended for Jackson students who may wish to teach Physical Geography in high schools, but there is also room for engineering students who cannot find place for 54-5 and 54-23 and 24. The text-books are Tarr (New Physical Geography) and Tarr & Von Engeln (Laboratory Manual of Physical Geography). A few lectures in geology will be given. Three periods a week and seven required Saturday afternoon excursions. Counting as three term hours.

PROFESSOR LANK

54-5. (F) Physical Geology. Studies the processes which have left their records on the earth. Frequent excursions. Wednesday 5, 6, 7, 8 and Friday 6. Counting as three term hours.

PROFESSOR LANE

A knowledge of Chemistry, Physics and Trigonometry is presupposed.

- 54-23. (s) Economic Geology. The various natural sources of supply for man's needs and the economic and geologic principles governing their valuation and development. The instruction is chiefly by lectures and the work is mainly collateral reading. This subject is best taken with 54-24 and preceded by some course in Geology or Mineralogy. One period a week. Counting as one term hour.

  PROFESSOR LANE
- 54-24. (s) Historical Geology. A study of the geological periods, with field excursions and laboratory work on fossils. Wednesday 5, 6, 7, 8 and Friday 6. Counting as two term hours.

  PROFESSOR LANE

Geology I or 5 must precede; Biology I is helpful.

- [54-3. Mathematical Problems presented to geologists. Conferences and critical reading of selected papers and original work. Mathematics 4 must precede Geology 3; Mathematics 6 must precede or accompany it. Counting as three term hours each half-year. PROFESSOR LANE]
- [54-4. Field Geology. Conference, one hour; field work, six hours a week; open to students who have taken Geology 24. First part of first and last part of second half year. Counting as three term hours.

PROFESSOR LANE

### 64 MINERALOGY

### PROFESSOR LANE

Professor Lane would be glad to advise students wishing to take a thesis subject in Chemistry or Mathematics of geological, mineralogical or crystallographic interest.

- 64-1. (F) Mineralogy and Lithology. Open to students who have taken Chemistry 1. Two recitations and four hours of laboratory work or excursion. Counting as three term hours.

  PROFESSOR LANE
- [64-2. (s) Crystallography and Advanced Mineralogy. Open to students who have taken Mineralogy 1. Two lectures and four hours laboratory work and field excursions. Counting as three term hours. PROFESSOR LANE]

### 16 PHILOSOPHY

# PROFESSOR SCHMIDT

- [16-1. (F) Introduction to Philosophy. The course attempts to give the beginner in philosophy a perspective of what philosophy is about and what kind of help it may give him.

  PROFESSOR SCHMIDT]
  - [16-2. (s) Introduction to Philosophy. A continuation of the preceding.

    PROFESSOR SCHMIDT]
- [16-3. (F) Logic. An elementary exposition of logic, in the modern sense of the word, of critique of cognition, structure of systems, and scientific methods.

  PROFESSOR SCHMIDT]
- [16-4. (s) Logic. The "new" logic. An introduction to the calculus of classes and propositions; with applications. This course presupposes Philosophy 3. PROFESSOR SCHMIDT]
- 16-55. Psychology. An elementary lecture course. Normal human psychology will form the main subject of the course; but abnormal and supernormal phenomena will be studied in so far as they shed light on normal psychology. Lectures, illustrative experiments, conferences.

PROFESSOR SCHMIDT

- r6-8. Ethics. A critical survey of the evolution of ethical ideals, followed by a constructive theory. But the main emphasis of the course will be laid on the application of the theory to the problems of the modern world of action.

  PROFESSOR SCHMIDT
- 16-16. (s) Experimental Psychology. An elementary laboratory course; open only to those who either have finished or are taking the course in general psychology (55). Nine hours of laboratory work counting for three term hours.

  PROFESSOR SCHMIDT

#### 26 EDUCATION

# PROFESSOR SCHMIDT

16-55. Psychology. This course is listed in the Department of Philosophy. It is recommended that students who expect to teach take this course during the Sophomore year, as it is required for all courses in Education except 26-1.

- 26-1. (F) Principles of Education. Brief introductory study of the Educational Reformers.

  PROFESSOR SCHMIDT
- [26-2. (s) Child Study. Child psychology; the relation of the school to child welfare including a discussion of such problems as school hygiene, backward children, juvenile delinquents and public play grounds; principles of moral and religious education.

  PROFESSOR SCHMIDT]
- 26-4. (s) Educational Psychology. A study of the application of psychology to the problems of education. Professor Schmidt

This course may be taken during the second term of the year in which the course in General Psychology 16-55, is taken.

26-5. (F) Principles of Secondary Education. Mr. Shaw

This course presupposes 26-1 and 26-4; it is meant primarily for those who expect to make secondary-school teaching their profession.

- [26-6. (s) Principles of Secondary Education (continued). Mr. SHAW]
- 26-7. (s) Practice Teaching. Teaching under supervision in the high schools of Arlington, Medford, Somerville and Winchester. Only students who have finished 26-5 will be permitted to take this course. No student will be recommended by the Department of Education for a teaching position, unless he has shown teaching ability in the course in practice teaching.

Mr. SHAW

### 36 HISTORY

# Professor Andrews

\*36-1. The introductory course, designed to give a comprehensive view of the various political, religious, industrial, and social factors that have contributed to the Europe of today, and thus to pave the way for a more detailed study of limited periods. The field is in Medieval, and Modern European History and emphasis is distinctly on the modern period. Text-books, lectures, assigned reading and thesis.

Professor Andrews

Students desiring to take as many subjects as possible in the department should elect History 1 and 2 early in their course. In History 6, 7, 9 and 15 a reading knowledge of French is useful.

- 36-2. General History of England. Text-book, lectures, analyses, and themes.

  PROFESSOR BOLLES
- 36-3. General History of America. Text-book, lectures, analyses, and themes.

  PROFESSOR BOLLES
- 36-6. (F) The French Revolution, the Napoleonic Period and the history of Europe to 1850. Text-book, discussions, assigned reading and thesis.

PROFESSOR ANDREWS

- 36-7. (s) Modern Europe, 1850–1914. One of the chief purposes of this course is to furnish some explanation of present-day questions in European affairs. Discussions, assigned reading and thesis. Professor Andrews
- [36-9. The History of Eastern Europe from the earliest times to the present day. This subject includes the history, religions, institutions, and political and economic conditions of the countries and peoples of the Nearer East, including, especially, Russia, Poland and other Slavic nations, the Byzantine Empire, the Balkan States and the Ottoman Empire, with some attention to Asia Minor, Egypt and Northern Africa. Lectures, discussions, assigned reading and thesis.

  Professor Andrews]

The second half-year may be taken separately by special permission of the instructor.

36-15. Seminar in History and Public Law. Investigation of selected topics from the sources. During the year 1915-16 the subject of study will be taken from the recent history of Europe. History 15 is open only to such students as receive the special permission of the instructor. Hours and credit to be arranged with the instructor.

PROFESSOR ANDREWS

## 46 PUBLIC LAW AND ADMINISTRATION

### Professor Andrews

History I should precede or accompany any subject in Public Law but students may be admitted to classes by special permission of the department. Students desiring to take all the subjects in this group should elect History I in their first year, and Public Law I, or its alternate, in their second year.

- [46-1. (F) Political Institutions of the United States Federal, State, and Municipal. The framework of American Government is studied but emphasis is placed upon its actual working as modified by usage and existing conditions. Political parties, their place and development will be given due emphasis. Attempts will be made to study at close range the machinery of state and local legislative bodies. Each student will be given an opportunity to report on the governmental conditions in the locality with which he is most familiar. Text-book, lectures, discussions and thesis.

  PROFESSOR ANDREWS]
- [46-3. (s) Modern English Government. Detailed study of the actual working of the English Government. Attention will be given to the procedure of Parliament and its relation to the executive, to the administrative structure, the organization and influence of political parties, and colonial relations. Comparisons with American and Continental political conditions will be attempted. Text-book, lectures, assigned reading, and thesis.

PROFESSOR ANDREWS]

[46-4. (F) European Government and Politics. A study of the constitutions of the chief European states, together with the consideration of the most important questions of European politics. A reading knowledge of French is desirable. Text-book, lectures, assigned reading, and thesis.

PROFESSOR ANDREWS]

- [46-8. (s) Colonial Governments: The governments of colonies and dependencies throughout the world. Attention will be given to the history of modern colonization, to past and present experiments in administration, and to the international aspects of the colonial development of modern nations. Lectures, assigned reading and thesis. Professor Andrews
- 46-10. International Law and Modern Diplomacy. The history of international law and consideration of its leading principles and practice. Cases in modern diplomatic procedure will be used. Textbook, lectures, discussions and assigned reading.

  PROFESSOR ANDREWS

### 66 POLITICAL SCIENCE

## ASSISTANT PROFESSOR WILSON

\*66-1. Elements of Economics. (a) First semester: a consideration of the fundamental concepts of economics. The factors of production, exchange, distribution and consumption; the services of land, labor, capital and managerial ability; the laws of wages, rent, interest and profits. (b) Second semester: a study of present day economic problems. The corporation, trusts, railways, monopolies, tariff and free trade. The rise of the modern labor problem; types of labor unions, of employers' associations, of industrial peace agencies; woman labor and the minimum wage; child labor, industrial education and vocational guidance; mis- under- and unemployment; industrial accidents, occupational diseases, poverty and workingmen's insurance; profit-sharing, coöperation and welfare schemes. The effects of immigration on our economic, social and civic life; the beginnings, teachings and progress of modern socialism, its relation to trade unionism, syndicalism and anarchism. The relation of the State to industry. The aim of this course is to present economic and social movements and their underlying causes in such a way as to give to the non-specialist, whatever his future work may be, an intelligent understanding of current industrial problems and tendencies. Lectures, quizzes, text, assigned readings.

ASSISTANT PROFESSOR WILSON

Economics 1, or its equivalent, is introductory to all the other subjects offered by the department.

66-2. (F) Modern Industrial History of Europe. A survey of existing industrial society in terms of development. The local industry of feudalism, the manorial and guild systems, the rise of nationalism, custom and competition, the effects of the Industrial Revolution on the development

of technique, the separation of industrial functions, concentration of wealth, the growth of industrial institutions, and the theory of industrial change; the effects of the machine process upon social life and institutions. Lectures, text and assigned readings.

MR. L. P. RICE

- 66-22. (s) Economic History of the United States. Brief consideration of economic conditions in the colonies; the growth of western settlement; economic relations growing out of slavery and the Civil War; study of the growth of agriculture, mining, manufacture, transportation and the resultant types of domestic and foreign commerce; brief survey of national legislation on currency, finance, taxation, including the tariff, together with its relation to industry and commerce. Lectures, text and assigned readings.

  Mr. L. P. RICE
- 66-3. (F) Elements of Sociology. A general course in the foundations of sociology, including a survey of social origins, social evolution and some account of the prevailing types of social activities of present day society. Methods of social control—law, belief, public opinion, social suggestion. Social organization, social ideals and theories of social progress. Lectures, readings, discussion.
- 66-13. (s) Social problems. A study of current problems in sociology: population, the family, child welfare, the woman movement; the assimilation of the foreign elements in American population; rural isolation and city congestion; problems of poverty, delinquency and dependency. Movements for social betterment such as improved standards of living, housing and civic recreation. Lectures, readings, discussion. Mr. L. P. RICE
- [66-4. (F) Principles of Public Finance. Public expenditures; classification of public revenues; recent reforms in taxation; the development and significance of public debts; financial administration; recent European and American works on finance. Lectures, discussions, text.

# Assistant Professor Wilson]

- [66-5. (s) Fiscal History of the United States: an historical course, with special reference to the financial experience of the United States. Leading topics are Hamilton's financial system; protection and revenue tariffs; the bank question; the fiscal policy of the Civil War; resumption of specie payments; the national banking system; state and local taxation; silver legislation and the panic of 1893; government loans; resumé of recent financial legislation. Lectures, discussions. text. Assistant Professor Wilson]
- **66-6.** (F) Modern Industrial Combinations. The economics of corporations with special reference to the so-called trust problem. Among the topics treated are trust promotion, capitalization, trusts and industrial efficiency, influence of combinations upon prices, profits, wages, rights of investors,

international trade, industrial stability and business honor; the practical results attained through publicity, taxation, recent court decisions and State regulation. Lectures, recitations, reports, text.

ASSISTANT PROFESSOR WILSON

- 66-16. (s) Modern Labor Problems. This subject deals mainly with the social and economic problems arising from the relations of employers and their laborers. The chief topics will be the growth, methods and aims of modern associations of wage earners; methods of conciliation and arbitration; strike and factory legislation; employers' liability and recent compensation acts; compulsory publicity; provident institutions and friendly societies; the relation between trade unions and scientific management. Each member of the class will be expected to make a report upon a labor union. Lectures and recitations, text.

  ASSISTANT PROFESSOR WILSON
- 66-17. Business Organization and Administration. This course treats of the various types of business organization, management and administration; plant equipment; problems of internal organization; modern business practice in selecting, placing and training employees; methods of remuneration and promotion; just relations between employer and employee. A critique of the various efficiency systems, with special reference to the principles and practice of scientific management, their scope, application, economic and social results. The ideal business administrator. The place of vocational guidance in the field of business and industry. Students desiring to prepare for executive and administrative positions will find this course of particular assistance. Lectures, discussions, and reports.

Assistant Professor Wilson

Either half-year may be taken as a half-subject.

66-18. Transportation Problems. The economic, financial and social problems arising from modern systems of transportation, with special reference to railway transportation, in the United States. The chief topics are: brief historic survey of water and railway transportation; railway charters, powers of directors and stockholders, the nature of railway securities; railway traffic; fares, rate making, rebates, pooling and railway consolidations; the American systems of State railway commissions, the Interstate Commerce Commission, the recent extensions of Federal control; the effects of transportation systems upon industrial competition. A part of the time will be devoted to some of the more recent problems of electric railway development. A special report will be required from each student of the subject. Lectures and recitations.

ASSISTANT PROFESSOR WILSON

Either half-year may be taken as a half-subject.

66-7. (s) The History of Economics: an account of the beginnings, the progress, and the various schools of economic science; study of the writings

of Adam Smith, Ricardo, Mill and others. Political Science 7 is open to advanced students who are specializing in the department. A reading knowledge of French and German is desirable.

ASSISTANT PROFESSOR WILSON

This course is open to graduate students only.

66-9. Seminar in Economics and Sociology, designed for advanced students who are specializing in the department. Questions in economics, statistics or sociology may be selected. Hours and credit to be arranged.

ASSISTANT PROFESSOR WILSON

### 18 ORATORY

# ASSISTANT PROFESSOR GILMER

- ratitude and gesture; declamation; delivering of speeches, extempore and propagate; final original oration.

  Assistant Professor Gilmer
- 18-2. (F) Argumentation and Debate. Impromptu and prepared debate.

  Individual criticism. ASSISTANT PROFESSOR GILMER

### 28 CLASSICAL HISTORY AND ARCHÆOLOGY

# PROFESSOR DENISON AND ASSISTANT PROFESOR WYATT

[28-1. (F) Greek and Roman Architecture. In this course a special effort will be made to trace the influence of Greek and Roman Architecture on the architecture of subsequent periods, particularly of our own time; and also to treat later styles sufficiently to make clear fundamental differences and unspire the student to further reading and study.

PROFESSOR DENISON]

The instruction in this and the following courses will be by means of lectures, class reports and lantern slides.

- [28-2. (s) Greek and Roman Sculpture. The twofold purpose of this course is, to inspire in the student a love for the beautiful, and to enable him o gain some understanding of the bases of present-day art and the principles of its interpretation.

  Assistant Professor Wyatt]
  - [28-3. (F) Roman Private Life.

Professor Denison]

- 28-4. (s) Greek Private Life. Assistant Professor Wyatt In subjects 3 and 4 there will be systematic treatment of such topics as birth, education, marriage, death, the house, furniture, dress, meals, imusements, careers and occupations.
- 28-5. (F) Roman Religion and Public Life. In this course special stress vill be laid on the Roman Religion, but there will be systematic study of other topics such as the topography of Rome, political, legal and military nstitutions, measures and money, books, inscriptions, chronology and calendar.

  PROFESSOR DENISON

- [28-6. (s) Greek Mythology and Religion. The underlying principles of Greek religion will be considered. The Myths will be treated in their relation to ancient and modern literature and art. Textbook (Fairbanks, Greek Mythology).

  Assistant Professor Wyatti
- 28-7. (F) Greek History; from the earliest times to the death of Alexander, with consideration of the sources. Textbook (Bury).

ASSISTANT PROFESSOR WYATT

28-8. (s) History of Rome; from the beginnings of the city to the Fall of the Western Empire, with study of the sources.

PROFESSOR DENISON

### 38 MUSIC

# Professor Lewis

38-9. (F) Musical Appreciation, Elementary. Systematic studies in musical essentials from the listener's standpoint.

Professor Lewis

For Music 9 no technical preparation is requisite, but ability to recognize a melody is presupposed. Ability to follow a piano score is very helpful. Outside reading and laboratory study with automatic instruments are required. Music 9 is given in Tufts and Jackson in alternate years. In 1916–1917 it is given in Jackson.

- 38-10. (s) Musical Appreciation, Intermediate. A continuation of Music 9.

  Professor Lewis
- 38-1. (F) Elements of Theory. Lectures, practice, and analysis, with various text-books for reference. Professor Lewis

Only acquaintance with musical notation and with the piano keyboard is required. Music 1 is introductory to Music 21.

38-21. (s) Harmony. Lectures and practical work, based on Chadwick's Manual of Harmony; collateral reading on biography and theory.

PROFESSOR LEWIS

[38-22. (F) Advanced Harmony and Elementary Counterpoint. A continuation of Music 21. Professor Lewis]

A full equivalent of Music 1 and 21 must have been done by students who wish to begin their college work with Music 22.

[38-3. (s) Sight-reading in Song, and Harmonic Analysis.

PROFESSOR LEWIS

Only those who have finished Music 22 may take Music 3. The harmon c analysis begun in Music 22 is continued, with special attention to the problems of modern music. Harmonic Analysis, by B. Cutter, and Melodia, by Cole and Lewis, are the text-books.

38-24. (s) Counterpoint. Lectures and practical work, based on the manuals of Goetschius, Spalding, and others; collateral reading on biography and theory.

Professor Lewis

Laboratory work with the automatic instruments is required.

[38-6. (s) General History of Music, from the earliest times to the present ay, with special attention to the period since the death of Palestrina.

Acctures, with various treatises for reference.

PROFESSOR LEWIS]

38-25. Studies in one or more of the following subjects: Canon, Fugue, Orchestration, Form, Free composition, Musical History, Musical Criticism.

PROFESSOR LEWIS

The studies may be directed by lectures, or may consist of individual rork of students under the supervision of the instructor. Requirements s to previous studies in Music and in foreign languages will be given on pplication to the instructor.

### 88 PHYSICAL EDUCATION

DR. L. R. BURNETT, Director

The aim of the department is to secure the interest and particibation of the students in such exercises and training as they need for corrective, hygienic, and recreative purposes.

Lectures on anatomy, physiology, and personal hygiene are given during the first term of the Freshman year. Regular class exercises in the gymnasium during the winter, and outloor exercise in the fall and spring, are required two hours a week of all undergraduate students, for the first two years following admission to college. A medical examination is given and physical measurements and strength tests of all students are taken.

### THEOLOGY

All the subjects offered in the Theological School are open o election by qualified students in the School of Liberal Arts.

# Time-Schedule for 1916-17

(Subject to Revision)

SCHOOL OF LIBERAL ARTS AND JACKSON COLLEGE

Initials are used for the days of the week. The numeral following these letters indicates the program-hour, not the time of day. The working day is divided into eight periods as follows:

	0 ,		9 1
1	8.00	5	12.10
2	8.50	6	2.10
3	9.50	7	3.10
4	11.10	8	4.10

Thus MWF 2 means Monday, Wednesday and Friday at 8.50; TTS 4 means Tuesday, Thursday and Saturday at 11.10.

(F) indicates that the subject is offered for the first half-year only; (s) for the second half-year only. All subjects not so indicated extend through both terms.

The hour for the Tufts division is indicated by the letter T; for the Jackson division by J. All subjects not so indicated are

open to students of both colleges.

For description of the subjects, students are referred to the departmental statements.

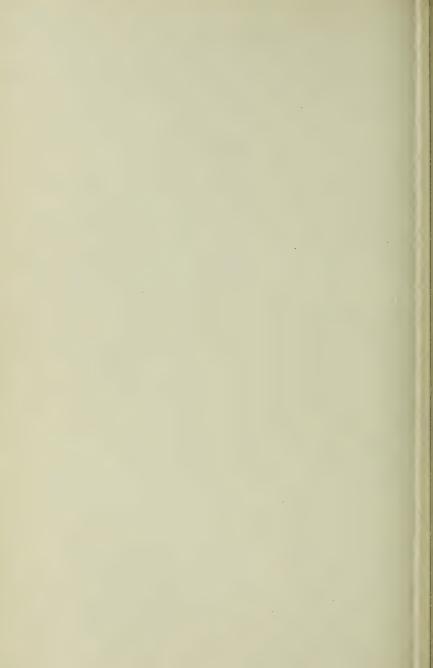
ucpai	tilicital statements.		
12-1	(F) English T MWF3 or	14-14	(F) Mathematics *
	TTS3; J MWF 2	(14-21	Mathematics T MW 2 or
	(s) English T MWF3 or TTS	)	MF6 or Th S2; J MF7 or
-	; J MWF 2		Tu S2
12-4	(s) English TTS 3	21-21	Graphics TTu 12 or W 67
12-10	English TTS 3		
12-11	English MWF5		(F or s) Mathematics *
	English MWF2		Philosophy TTS 4
	(s) English TTS 5	16-16	(s) Philosophy TTS 2
	(F) English MWF 3	16-55	Philosophy MWF 2
	(s) English MWF 3	18-1	(s) Oratory MWF 4
	(F) English MF 78	18-2	(F) Oratory MWF 4
		, 22-I	German T MWF 5; JTTS 3
	(F) English TTS 2	22-2	German TMWF2; JMWF3
	English TTS 4	22-2	German TMWF4; JMWF4
	English Tu 67	0	German F6
	(s) English TTS 2		German TTS 4
	(F) Mathematics TTS 4	0	German MWF 5
	(s) Mathematics TTS 4		
14-6	F) Mathematics TTS 2		German TTS 5
14-7	(s) Mathematics *	24-1	Physics Tu S 4 Laboratory
	(s) Mathematics TTS 3		M Tu W Th or F 678
14-0	(F) Mathematics TTS3		(F) Physics MWF 5
	(s) Mathematics TTS 2		(s) Physics MWF 5
4 10	(0)	24-7	Physics W 678

24-7 Physics W 678

- 24-II (F) Physics \* 24-I7 Physics \*
- on M Tu W Th or F 678
- 24-21 Physics TT7
- 26-1 (F) Education TTS I
- 26-4 (s) Education TTS I
- 26-5 (F) Education MWF I
- 26-7 (s) Education \*
- 28-4 (s) Class. Arch. MWF 4
- 28-5 (F) Class. Arch. MWF 4
- 8-7 (F) Class. Arch. MWF 5
- 28-8 (s) Class. Arch. MWF 5
- 32-1 French MWF 6
- 32-1A French \*
- 32-2 French T MWF2; J MWF7
- 32-3 French T MWF4; J MWF6 2-3B French TTS 4
- 2-4 French TTS 2
- 2-5 French TTS 3
- 4-1 Chemistry TT5
  - Laboratory Tu or Th 678
- 4-4 Chemistry TTS 123
- 4-5 Chemistry TTS 123
- 4-7 (s) Chemistry WF 678
- 4-8 (s) Chemistry WF 4
- 4-9 (F) Chemistry F 123 4-11 Chemistry MF 5; M 678
- 4-12 (F) Chemistry \*
- 4-16 Chemistry \*
- 4-17 Chemistry TT 8; M 123
- 4-19 (F) Chemistry \*
- 1-20 Chemistry TTS 5
- Laboratory Tu or Th 678 4-22 Chemistry MWF 123
- 5-2 (F) Chemistry MF 123 or 678
- j-3 (s) Chemistry MF 678
- ;-10 Chemistry TTS 5; W 123
- 5-1 History MWF 5 or TTS 4
- -2 History TTS 4
- 6-3 History MWF 4
- 6-6 (F) History TTS 5

- 36-7 (s) History *TTS 5*
- 36-15 History \*
- 38-1 (F) Music Tu 6 Th 67
- 38-9 (F) Music J TTS 2
- 38-10 (s) Music J TTS 2
- 38-21 (s) Music Tu 6 Th 67
- 38-24 (s) Music \*
- 38-25 Music \*
- 42-1 Italian MWF 3
- 44-1 Biology TT 678
- 44-3 Biology *MF 678*
- 44-7 Biology *MF 678*
- 44-8 Biology \*
- 44-11 Biology *MF 678*
- 44-12 Biology *TT* 5
- 44-13 (s) Biology S I
- 46-10 Public Law MWF3
- 52-1 Latin T MWF 3; J TTS 3
- 52-2 Latin TTS 4
- 52-3 Latin TTS 2
- 52-5 Latin \*
- 52-6 Latin \*
- 54-1 (s) Geology TTS 3 or 4
- 54-5 (F) Geology W 5678; F 6
- 54-23 (s) Geology W 5
- 54-24 (s) Geology W 678; F 6
- 62-1 Greek MWF 3; TTS 2
- 62-2 Greek TTS 5
- 62-3 Greek *TTS 3*
- 62-6 Greek \*
- 64-1 (F) Mineralogy *M* 45; *TT* 67
- 66-1 Pol. Science MWF 3
- 66-2 (F) Pol. Science MWF 4
- 66-3 (F) Pol. Science MWF 2
- 666 (F) Pol. Science MWF 2
- 66-7 (s) Pol. Science \*
- 66-9 Pol. Science \*
- 66-13 (s) Pol. Science MWF 2
- 66-16 (s) Pol. Science MWF 2
- 66-17 Pol. Science TTS 3
- 66-18 Pol. Scien Tce TS 2
- 66-22 (s) Pol. Science MWF 4

<sup>\*</sup> Hours to be arranged.



# JACKSON COLLEGE FOR WOMEN

CAROLINE STODDER DAVIES, A.M., Dean

# Standing Committees

PROMOTIONS: Dean Davies, Chairman; Professors Fay, Neal, Schmidt nd Wilson.

STUDENT ORGANIZATIONS: Dean Davies, Chairman; Professors Fay nd Gilmer.

# Faculty of Jackson College for Women

HERMON CAREY BUMPUS, Ph.D., Sc.D., LL.D. PRESIDENT

CAROLINE S. DAVIES, A.M. DEAN Professor of English

WILLIAM H. REED, A.M., RECORDING SECRETARY
Assistant Professor of Modern Languages

### Professors

Arranged in the order of their service at Tufts College

CHARLES E. FAY, A.M., LITT.D.

Wade Professor of Modern Languages

FRANK W. DURKEE, A.M. Chemistry

LEO R. LEWIS, A.M.

History and Theory of Music

FRANK G. WREN, A.M.

Walker Professor of Mathematics

FRED D. LAMBERT, Ph.D. Botany

WILLIAM K. DENISON, A.M.

Latin Language and Literature

\*HENRY C. METCALF, Ph.D.

Jackson Professor of Political Science

EDWIN C. BOLLES, Ph.D., D.D., LL.D. Dickson Professor of English and American History

WILLIAM R. RANSOM, A.M.

Mathematics

ALFRED C. LANE, Ph.D., Sc.D.

Pearson Professor of Geology and Mineralogy

HENRY I. CUSHMAN, A.M., D.D.

HINCKLEY G. MITCHELL, D.D.

Hebrew and Old Testament Exegesis

<sup>\*</sup>Absent on leave.

ARTHUR I. ANDREWS, Ph.D.

History and Public Law

KARL SCHMIDT, Ph.D.

Philosophy and Education

LEE S. McCOLLESTER, S.T.D.

Packard Professor of Christian Theology

HERBERT V. NEAL, PH.D.

Zoology

CLARENCE R. SKINNER, A.M.

Applied Christianity

CHARLES H. GRAY, Ph.D.

English

## Assistant Professors

Arranged in the order of their service at Tufts College

ALEXANDER DILLINGHAM, A.M.

Mathematics

ALBERT H. GILMER, A.M.

English

HENRY H. MARVIN, PH.D.

Physics

EUGENE H. BABBITT, A.B.

Modern Languages

RALPH B. WILSON, A.M.

Political Science

WILLIAM F. WYATT, PH.D.

Greek

### Instructors

CROSBY F. BAKER, M.S. Chemistry

OSEPH CHANDLER, Ph.D.

Organic Chemistry

OHN L. C. KEEGEN, A.M.

English

VATHANIEL H. KNIGHT, B.S.

Physics

MARY C. MURRAY

Physical Education

FRANK W. POTE, B.S. *Physics* 

AUGUSTE L. POULEUR. M.S. Chemistry

HARRIS RICE, S.B.

Walker Special Instructor in Mathematics

LLOYD P. RICE, A.M.

Political Science

EDWIN A. SHAW, M.S.

Education

CARL W. STAPLES, B.S.

Chemistry

### House Mistresses

Mrs. DOROTHY CHAMBERLAIN
Richardson House

MRS. MARY C. HULL

Gamma House

MISS MARY C. MURRAY

Alpha House

Mrs. GRACE G. WATERMAN

Metcalf Hall

# Jackson College for Women

Women are admitted to the courses of instruction given at Tufts College on the same terms as men. The Faculty of Jackson College for Women is the same as the Faculty of the School of Liberal Arts and in many cases, particularly in the sciences, the men and women attend classes in common and work in the same laboratories.

The buildings exclusively occupied by Jackson College are six in number. Miner Hall contains the office of the Dean of Women, reception rooms and various classrooms. It is located near the College Library. Metcalf Hall is the principal dormitory, and contains the refectory; this building serves as a general headquarters for the women students, and its plan and furnishings are well adapted to this purpose. Alpha House, Richardson House, and Gamma House are smaller dormitories, each under the direct supervision of a resident house mistress. The Dean of Women resides in a cottage adjoining Metcalf Hall, where women students are free to call upon her at such times as they may desire to meet her in her home, or to seek special counsel or advice.

The women's gymnasium is a small building excellently equipped with apparatus. The main room is frequently used as an auditorium, as it contains a small stage well supplied with facilities for various dramatic activities.

The requirements for the degrees of A.B. or B.S. are the same as in Tufts College. All graduates of Jackson College receive the diploma of Tufts College.

### **EXPENSES**

The tuition charges and incidental expenses are the same as n the School of Liberal Arts, with the exception of the charge or Physical Education, which is ten dollars rather than fifteen dollars. Room rent in the several dormitories may be tabulated as follows; the prices given are the rate per student per term.

# Dormitories for Women

Double Rooms

	Metcalf	Richardson	Alpha	Total	
\$20.00	I			I	
22.50	2			2	
25.00		•	1	I	
27.50			I	I	
30.00	2	7	3	12	
37.50	4			4	
42.50	4			4	
Total Double Rooms	13	7	5	25	
Single Rooms					
\$20.00	I		I	2	
25.00	I			I	
30.00		4		4	
37.50	4			4	
Total Single Rooms	6	4	I	11	
Total	19	11	6	36	

Students are required to reside in the dormitories or with their families unless permitted by the Dean to make other arrangements.

All resident students board at Metcalf Hall.

Payment of table-board (to Mrs. Grace G., Waterman or order) must be made on or before the first Monday of each month. Board must be paid promptly in advance, viz: on registration day to the first Monday in October and thereafter monthly. The present charge for a month (four weeks) is twenty dollars.

For absences due to a student's illness and lasting more than one week, deduction will be made from the board bill.

# REGISTRATION

The conditions controlling admission to Jackson College are in general the same as those controlling admisson to any of the associated schools and are given in detail in the earlier part of this publication. Those intending to enroll as students should make their intentions know to the Dean as early as possible.

## PHYSICAL EDUCATION

# MISS MURRAY

This subject is required during the Freshman and Sophomore years for healthful recreation, corrective and hygienic purposes. A medical examination, including physical measurements, is given at the beginning and end of the course. Class exercise includes gymnasium work, æsthetic dancing and basket ball drill. Weekly lectures on Hygiene and Physiology are given during the first term in the Freshman year. Superintended outdoor sports are required during the autumn; these include basket ball, tennis, volley ball and field hockey.

### SCHOLARSHIPS

In addition to the scholarships named below, with the amount of their endowments, a portion of the scholarship funds of Tufts college has been set apart for the students of Jackson College. Applications should be addressed to the Committee on Scholarships.

- THE JOHN AND LUCY H. STOWE SCHOLARSHIPS. (5) \$10,000 Five scholarships for women students. Founded in 1894 and 1902 by Mrs. Lucy H. Stowe of Lawrence.
- THE MARY AND LUTHER GILBERT SCHOLARSHIPS. (2) \$4,000
  Two scholarships. Founded in 1902 and 1904 by Mrs. Mary G. Knight,
  of Roxbury, for the benefit of women.
- THE CHARLES A. AND CORNELIA B. SKINNER SCHOLARSHIP. \$1,000

  Founded in 1907 by Rev. Charles A. Skinner, D.D., and Mrs. Cornelia

  B. Skinner, of Cambridge, Mass.
- THE ALPHA OMICRON PI PRIZE SCHOLARSHIP.

An annual gift of \$50. by the Alumnæ of the Tufts Chapter of Alpha Omicron Pi, and given to that woman in the senior class who shall have made the best record in the prescribed work of the A. B. Course.

THE ALPHA XI DELTA PRIZE SCHOLARSHIP.

An annual gift of \$50, by the Lambda Chapter and Alumnæ of Alpha Xi Delta and given annually to that senior who, at the end of the Junior year, shall have maintained the highest excellence in a course of study broadly and wisely chosen.

THE CHI OMEGA PRIZE SCHOLARSHIP.

An annual gift of \$50. by the Alumnæ of the Chi Alpha Chapter of Tufts College, to be given annually to a student of Jackson College who at the end of her Junior year has attained commendable scholarship in Economics and Sociology and has shown a keen interest in Social Service. The purpose of this scholarship is to encourage practical work during her Senior year.

THE BOSTON ALUMNÆ CHAPTER OF SIGMA KAPPA SCHOLARSHIP.

An annual gift of \$50. by the Boston Alumnæ Chapter of Sigma Kappa, representing Boston University and Jackson College, available at Boston University on the even year, beginning 1914, and at Jackson College on the odd year, to be given to a sorority or non-sorority girl, worthy in character and scholarship, who is struggling to meet the expenses of a college education.

### LOANS AND AIDS

The Woman's Universalist Missionary Society of Massachusetts maintains a fund for the use of students of Jackson College. The scholarships, which have a value of \$100, are restricted to Universalists. It is understood that the beneficiaries in due time will return an equivalent amount to the Fund.

The Hettie Lang Shuman Memorial Fund was founded in 1905 by Mr. A. Shuman, who presented one thousand dollars to the College, in memory of his wife. The interest of this fund is annually expended in aiding deserving women students.

# ENGINEERING SCHOOL

GARDNER CHACE ANTHONY, Sc.D., Dean

# Standing Committees

CURRICULUM: Dean Anthony, Chairman; Professors Hooper, Durkee, Sanborn, Earle, Chase, and Rockwell.

PROMOTIONS: Dean Anthony, Chairman; Professors Ransom, Rockwell, and Assistant Professors Ashley and Conner.

# Faculty of the Engineering School

HERMON CAREY BUMPUS, Ph.D., Sc.D., LL.D., PRESIDENT

GARDNER C. ANTHONY, A.M., Sc.D., DEAN

Professor of Technical Drawing. Actng Head of Department of Mechanical Engineering

WILLIAM H. REED, A.M., SECRETARY

### Professors

Arranged in the order of their service at Tufts College.

WILLIAM L. HOOPER, A.M., Ph.D., LL.D. Electrical Engineering

FRANK W. DURKEE, A.M. Chemistry

SAMUEL C. EARLE, A.M. English

CHARLES H. CHASE, S.B. Steam Engineering

\*HENRY C. METCALF, Ph.D. Political Science

WILLIAM R. RANSOM, A.M.

Mathematics

FRANK B. SANBORN, C.E., M.S. Civil Engineering

EDWARD H. ROCKWELL, S.B. Structural Engineering

ALFRED C. LANE, A.M., Ph.D., Sc.D. Geology and Mineralogy

### Assistant Professors

Arranged in the order of their service at Tufts College.

GEORGE F. ASHLEY

Technical Drawing

EDWIN B. ROLLINS, B.S. Electrical Engineering

<sup>\*</sup> On leave of absence.

MELVILLE S. MUNRO, B.S. Electrical Engineering

ALEXANDER DILLINGHAM, A.M.

Mathematics

FRANK E. SEAVEY, A.M.

English

RICHARD C. SMITH, B.S. Structural Engineering

SAMUEL L. CONNER, M.S Railroad Engineering

HOWARD H. CARROLL, S.B. Technical Drawing.

HENRY H. MARVIN, B.S., Ph.D.

Physics

RALPH B. WILSON, A.M.

Political Science

VANNEVAR BUSH, M.S., Eng.D.

Electrical Engineering

### Instructors

CONRAD A. ADAMS, B.S.

Mechanic Arts

FREDERICK O. ASPINWALL, M.S. Chemistry

CROSBY F. BAKER, M.S. Chemistry

HARRY P. BURDEN, B.S. Civil Engineering

JOSEPH CHANDLER, Ph.D.
Organic Chemistry

SHIRLEY W. HARVEY, A.B.

English

MERRILL C. HILL, A.M.

Modern Languages

NATHANIEL H. KNIGHT, B.S. *Physics* 

EDGAR MacNAUGHTON, M.E.

Mechanical Engineering

FRANK W. POTE, B.S. *Physics* 

AUGUSTE L. POULEUR, M.S. Chemistry

HARRIS RICE, S.B.

Walker Special Instructor in Mathematics

Assistants

 $\begin{array}{c} \text{IRVING D. MARSHALL} \\ \textit{Drawing} \end{array}$ 

FRANK G. WAHLEN

Mechanic Arts

# Courses of Instruction

The School offers courses leading to the degree of Bachelor of Science in Civil Engineering, Structural Engineering, Mechanical Engineering, Electrical Engineering, and Chemical Engineering.

During the first two years the course of study and elective privileges are the same for all departments. The importance of developing the power to write clear and concise English is emphasized by correlating this subject with the work of other departments, thus making it a fundamental subject for technical training. The subjects of Mathematics, Physics, Chemistry, Graphics and of Mechanic Arts, being common to every field of engineering, are required of all students. Introductory engineering courses in Heat, Electricity and Hydraulics are also given to all during the Sophomore year.

The more technical work of the Junior and Senior years is tabulated in the following pages under the headings of the respective departments.

On the pages immediately following the Outline of Courses will be found an index of the subjects, which also indicates the system of numbering.

Following this index is the detailed description of the subjects in numerical order.

# REQUIREMENTS FOR THE DEGREE

One hundred and forty term hours are required for graduation, this being the equivalent of about fifty-two hours of study, recitation, and laboratory hours per week. A grade of C or higher must be obtained in at least seventy term hours.

# RELATION OF THE SEVERAL DEPARTMENTS

Freshmen and Sophomore	Junior	Senior
	Civil and Structural $\left\{  ight.$	Civil Structural
General course common to all	Mechanical and Electrical	Mechanical Electrical
	Chemical	Chemical

# OUTLINE OF COURSES

An index of the subjects, and key to the system of numbering may be found on the pages immediately following the Outline of Courses. Following the index are the details of the subjects in their numerical order.

# FRESHMAN YEAR

[Alike for all courses.]							
FIRST T		m hour	SECOND TER		Te	rm ho	our
11-1 English		. 3 11-2	English				3
13-2 †French or }			†French or †German } · · ·				3
21-4 †Graphics or ) ·		3 21-5	Graphics				3
25-2 †Mechanic Arts 25-3 †Mechanic Arts	ł	25-3	†Mechanic Arts } .				
			Mathematics				3
41-4 Surveying		. 2 31-31	Physics or { *Physics }			- }	3
88 Physical Training		· ½ 31-8	Physics Laboratory			. 1	11/2
Total	171/2	or 18½ 88	Physical Training .				
			Total			17 or	20

# SOPHOMORE YEAR

bornome	AL ILIK					
[Alike for all courses.]						
FIRST TERM	Second Term					
Term hour	Term hour					
21-13 Mechanism     3       29-4 Mathematics     3       31-2 Physics or }     4       31-32 *Physics }     4       31-7   Physics Laboratory     1½       35-1 Chemistry or }     3       35-20 *Chemistry }     4       51-20 §Heat Engineering     2	21-8     Graphics     3       31-7     †Physics Laboratory     1½       35-1     Chemistry or   4     4       35-20     *Chemistry   4     4       41-40     Hydraulic Engineering     3       45-21     Mechanics     3       61-20     Electrical Engineering     3       88     Physical Training     ½					
88 Physical Training ½	Total 17 or 18					
Total 16 or 18						

Electives
English, French or German.

Electives
English, French or German.

<sup>†</sup>As the courses to be pursued in Modern Language, Graphics and Mechanic Arts are dependent on the preparation of each student, definite instruction for the selection thereof is given at the time of registration.

<sup>\*</sup>Required of those not having one unit entrance credit in the subject.

<sup>10</sup>mit after 1916-17 \$After 1916-17 Read "51-1 Heat Engineering 3" || After 1916-17 Read "31-9"

# JUNIOR YEAR (After 1916-17)

# CIVIL AND STRUCTURAL ENGINEERING

	FIRST TERM		SECOND TERM
35-2 41-12 41-46 45-1 45-12 81-1	Qualitative Analysis         2           Railroad Surveying         3           Water Supplies         3           Applied Mechanics         3           Applied Mechanics Laboratory         1           Economics         3           Total         15	29-5 41-13 41-21 41-43 45-2 47-3	Mathematics
11- 14- 17-1 54- 64-1	Electives           English	11- 17-1 41-31 41-51	Electives           English         3           Spanish         3           Geodesy         2           Fire Prevention         2           Geology         2
	MECHANICAL AND ELEC	CTRICA	L ENGINEERING
35-2 45-1 45-12 51-24 61-3 81-1	Term hour   Term hour	2- 29-5 4 -4 51-3 61-5 61-8	SECOND TERM
35-2 35-4 35-10 45-1 45-12 81-1	FIRST TERM  Qualitative Analysis	35-3 35-4	SECOND TERM
11- 17-1 24-2 64-1	Electives English	11-	Electives           English

# JUNIOR YEAR (For 1916-17 only)

# CIVIL AND STRUCTURAL ENGINEERING

35-2 41-12 41-40 45-1 45-12 51-1 81-2	FIRST TERM   Term hour	41-13 41-21 41-43 45-2 47-3 81-2	SECOND TERM   Term hour
11- 14- 54-	Electives English	11- 14- 54-	Electives English
	MECHANICAL AND ELE	CTRIC.	AL ENGINEERING
25-8 35-2 45-12 51-1 61-3 81-2	Term hour	41-41 45-4 51-3 51-21 61-5 61-8 81-2	SECOND TERM   Term hour
	FIRST TERM		Second Term
35-2 35-4 35-10 45-1 45-12 51-1 81-2	Term hour	35-3 35-4 35-10 41-41 45-4 81-2	Qualitative Analysis       2         Quantitative Analysis       3         Organic Chemistry       4         Hydraulics       2         Applied Mechanics       3         Economics       3         Total       17
11- 14- 24-2	Electives English Mathematics German 15 or 22	11-	Electives English

#### SENIOR YEAR

#### CIVIL ENGINEERING

	FIRST TERM Term hour		Second Term	Term hour
41-14 *41-46 41-95 45-3 47-1	Railroad Engineering		Sewerage	3
1	Total 14		Total	9-11
11- 14- 17-1 35-4 41-47 47-7 64- 66-	Electives English	11- 14- 17-1 35-4 41-17 47-2 47-8 54- 66-	Electives English Mathematics Spanish Quantitative Analysis Railroad Economics Theory of Structures Structural Design Geology Economics	3 3 3 3
	STRUCTURAL	Engin	EERING	
*41-46 45-3 47-1 47-7	First Term	47-2 47-8 47-99	SECOND TERM Theory of Structures . Structural Design	2
47-95	Structural Topics and Reports . 2 Total		Total	8-10
11- 14- 17-1 41-14 41-21 41-47 64- 66-	Electives  English	11- 14- 17-1 41-17 41-31 41-48 41-51 41-63 54- 66-	Electives English Mathematics Spanish Railroad Economics Geodesy Sewerage Fire Prevention Contracts Geology Economics	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3

<sup>\*</sup> Omit from Senior year after 1917-18

#### MECHANICAL ENGINEERING

	FIRST TERM		SECOND TERM
51-7 51-15 51-18 51-26 11- 14- 17-1 41-47 61-12 61-15 61-23 66- 81-5	Term hour	51-8 51-18 51-28 51-99 11- 14- 17-1 41-63 51-95 61-14 61-16 66-	Term hour   Power Plant Design   3   Machine Design   3   Mechanical Engineering Lab   3   Total   12   Electives   English   Mathematics   Spanish   3   Contracts   2   Mech Engineering Topics   2   Electricity   3   Electrical Engineering   3   Economics   3
	ELECTRICAL	Engin	EERING
	FIRST TERM		SECOND TERM
61-12	Dynamo Laboratory 3	51-14	Electricity
61-14	Electricity 3	61-16	Electrical Engineering 3
61-15	Electrical Engineering 3 Dynamo Design 3	61-99	Thesis 3-5
	Total 12		Total 9-11
	Electives		Electives
11- 14- 17-1 41-47 51-7 51-15 51-16 61-17 66- 81-5	English	11- 14- 17-1 41-63 51-8 51-18 51-28 61-96	English
	CHEMICAL I	Engin	EERING
	FIRST TERM		SECOND TERM
35-5	Quantitative Analysis 3	35-5	Quantitative Analysis 3
35-9	Gas Analysis	35-7 35-8	Fire Assay 2
35-11 35-17	Theoretical Chemistry 3 Applied Chemistry 3	35-8 35-11	Metallurgy
61-3	Dynamo-Electric Machinery 3	35-17	Applied Chemistry 3
	Total	35-99	Thesis
	Electives		Electives
11-	English	11-	English
14-	Mathematics	14-	Mathematics
17-1	Spanish	17-1	Spanish
41-46 54-	Spanish	41-48 54-	Sewerage
64-	Mineralogy	61-8	Electrical Laboratory 3
66- 81-5	Economics	66-	Economics

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II-I	3	English (First Term)	35-20	8	Chemistry
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11-4		English Composition			CIVIL ENGINEEDING
11-5	3	General English Literature		41	CIVIL ENGINEERING
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11-7		Advanced English Literature Technical Exposition	41-12		Railroad Surveying
11-8	2 2	Technical Theses	41-13		Railroad Engineering
11-9		Argumentation	41-14	° 3	Railroad Engineering
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13-2	*6	French	41-40		Hydraulics
13-3	3	French	41-41		Hydraulic Measurements
4		15 GERMAN	41-46	2	Water Supplies
15-1	*6	German	41-47	3	Water Supplies Water Power Engineering
15-2	*6	German	41-48	3	Sewerage
15-3	3	German	41-51	2	Fire Prevention
		17 SPANISH	41-63	3	Contracts
17-1	*6	Spanish	41-95		Civil Engineering Topics
A i		21 DRAWING	41-99	3-5	Civil Engineering Thesis
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21-8		Graphics	45-2	3	Applied Mechanics
21-13		Mechanism	45-3	3	Structural Mechanics
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			45-12		Applied Mechanics Laboratory
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29-5		Sophomore Calculus	47-7 47-8	3	Structural Design
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31-8		Physics Laboratory	51-3	3	Heat Engineering
31-9	11/2	Physics Laboratory	51-7	3	Engine Design
31-31	4	Physics Physics	51-8	3	Power Plant Design
31-32	4	-	51-15	3	Dynamics of Machinery
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05			31-99	3	THE THE THE THESE

<sup>\*</sup>Two terms; three term hours each.
†Two terms; first term, one term hour; second term, two term hours.
|| Two terms; four term hours each.
|| Two terms; one and one-half term hours each.
|\*\*Two terms; two term hours each.
|\*\*Two terms; one term hour each.

54-1 54-5 54-21	3 3 1	54 GEOLOGY  Physical Geology and Geography Physical Geology Physical Geography and Meteorology	61-15 61-16 61-17 61-20 61-23 61-27	3 3	Electrical Engineering Electrical Engineering Telephone and Telegraph Electrical Engineering Dynamo Design. Radio Engineering
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# Examination Group System

The courses are divided into six groups. Each of these groups has assigned to it three periods of four days each for each half year, during which periods all announced examinations in the courses of that group are given. These examinations are limited to the time assigned to these subjects on the program.

Composition of groups and periods allotted to each are as follows:

#### FIRST HALF-YEAR

Subject Gro	up Subject Gro	oup Subject	Group	Subject Group
II-I 5 3 11-5 3 11-5 3 11-15 3 11-15 5 13-1 6 13-3 3 15-1 6 15-2 6 15-3 3 17-1 4 21-4 3 21-13 21-13 21-13 21-13 21-13 25-2 4 25-3	31-2 6 31-7 5 31-32 6 35-1 1 35-2 4 35-4 1 35-5 1 35-10 5 35-10 5 35-11 5 35-17 3 35-20 1 41-4 6	41-14 41-40 41-46 41-47 41-95 45-1 45-3 45-12 47-1 47-7 47-95 51-1	5 5 6 2 3 1 1 3 3 3 4	51-18 3 51-20 3 51-26 5 61-3 5 61-12 5 61-14 0 61-15 3 61-17 2 61-23 4 81-2 6 81-5 2
25-8 4 29-4 2 29-20 3 roup 1. 2. 4. 4.	Oct. 20, 21, 23, 24. Oct. 25, 26, 27, 28. Oct. 30, 31. Nov. 1 Nov. 3, 4, 6, 7. Nov. 8, 9, 10, 11. Nov. 13, 14, 15, 16	Nov. 22, 23, 24 Nov. 27, 28. D Dec. 4, 5, 6, 7. Dec. 8, 9, 11, 1	, 25. Jan. 10 ec. 1, 2. Jan. 15 Jan. 19, 2. Jan. 24,	, 11, 12, 13.

Final Examinations February 2, 3, 5, 6, 7.

<sup>\*</sup>Two terms; three term hours each.

#### SECOND HALF-YEAR

Subject	Group	Subject (	Group	Subject	Group	Subject (	Froup
11-2	5	31-7	3	41-21	3	51-8	6
11-4	5	31-8	6	41-31	3	51-18	4
11-6	3	31-31	2	41-40	4	51-21	3
11-8	3	35-1	I	41-41	5	51-28	5
11-9		35-3	6	41-43	5	51-95	3
13-1	6	35-4	1	41-48	4	61-5	2
13-2	6	35-5	1	41-51	2	61-8	4
15-2	6	35-7	6	41-63	I	61-14	2
15-4	6	35-8	4	45-2	I	61-16	4
17-1	4	35-10	5	45-4	I	61-20	5
21-5	3	35-11	5	45-21	4	61-27	2
21-8	6	35-17	3	47-2	6	61-96	3
25-2	4	35-20	1	47-3	2	81-2	6
25-3	4	41-13	4	47-8	3		
29-3	1	41-17	5	51-3	4		
29-5	2		•				
, ,	_						

66	2.	Mar. 1, 2, 3, 5. Mar. 6, 7, 8, 9. Mar. 10, 12, 13, 14. Mar. 15, 16, 17, 19.	Mar. 29, 30, 31. Apr. 2. Apr. 3, 4, 5, 6. Apr. 7, 9, 10, 11. Apr. 12, 13, 14, 16.	May 8, 9, 10, 11. May 12, 14, 15, 16. May 17, 18, 19, 21. May 22, 23, 24, 25.
6.6	5.	Mar. 15, 16, 17, 19. Mar. 20, 21, 22, 23. Mar. 24, 26, 27, 28.	Apr. 28, 30. May 1, 2.	May 22, 23, 24, 25. May 26, 28, 29, 31. June 1, 2, 4, 5.

Final examinations, June 9, 11, 12, 13, 14.

# Departments of Instruction

#### ENGLISH and MODERN LANGUAGES

ri-i English. A study of the elemental forms of literary and scientific writing: description, exposition, directions, criticism, argument, and narration, with the ultimate aim of helping the student to think for himself. Reading of illustrative literature. One lecture and three recitations a week.

First term. Three term hours.

ASSISTANT PROFESSOR SEAVEY, PROFESSOR EARLE, and ASSISTANTS

11-2 English. A study of actual problems in expression. Reading in general science and literature under the guidance of weekly lectures. Three recitations a week. Preparation, 11-1.

Second term. Three term hours.

ASSISTANT PROFESSOR SEAVEY, PROFESSOR EARLE, and ASSISTANTS

11-4 English. An advanced subject in general composition, including the writing of daily and fortnightly themes. Two periods a week. Preparation, 11-2.

Second term. Two term hours. PROFESSOR EARLE and Mr. HARVEY

tr-5 English. A brief survey of English literature and history, from the beginnings to about 1750, aiming to broaden the student's appreciation of what he may get from books, and to suggest ways in which the past throws light on the problems of the present. Three periods a week. Preparation, 11-2.

First term. Three term hours.

PROFESSOR EARLE, ASSISTANT PROFESSOR SEAVEY, and Mr. HARVEY

11-6 English. A study of some of the most important literary and scientific developments of the nineteenth century. Three periods a week. Preparation, 11-2.

Second term. Two term hours.

PROFESSOR EARLE, ASSISTANT PROFESSOR SEAVEY, and Mr. HARVEY

ri-7 English. Advanced English literature. A study of some author, period, or type. The definite work to be carried on will be outlined by the instructor in charge each June for the following term. Three periods a week: two recitations and one thirty-minute conference. Preparation, 11-6.

First term. Two term hours.

11-8 English. A detailed study of the most important problems of technical writing. Two periods a week. Preparation, 11-2.

Second term. Two term hours.

PROFESSOR EARLE and ASSISTANT PROFESSOR SEAVEY

r1-9 English. An advanced subject in technical composition. No class meetings; each student writes papers from ten to fifty pages in length under the individual direction of the instructor. The subjects are taken, as far as possible, from technical work previously done by the student outside of college, or from special research. One thirty-minute conference a week. Preparation, 11-8.

First term; repeated in second term. Two term hours.

PROFESSOR EARLE and ASSISTANT PROFESSOR SEAVEY

11-13 English. Argumentative composition adapted to meet the special needs of engineers. Three periods a week. Preparation, 11-2.

First term. Three term hours.

Professor Earle

13-1 French. Elementary course. The essentials of grammar, with composition. Reading of short works of modern authors in prose and verse. Open to Freshmen whose entrance language is Latin, Greek, or Advanced German. Three recitations a week.

First and second terms. Six term hours.

MR. HILL

13-2 French. Review of grammatical principles especially with reference to difficulties encountered in translation. Outside reading of modern French novels. Class room work consisting of scientific reading from L'annee Scientific et Industrielle for 1913. Three recitations a week. Preparation, elementary credit in French, or 13-1.

First and second terms. Six term hours.

MR. HILL

15-1. German. Elementary course. The essentials of grammar with composition. Reading of short works by modern authors. Grammar: Vos' Essentials of German or Harris' German Lessons. Open to Freshmen whose entrance Language is Latin, Greek or Advanced French. Three recitations a week.

First and second terms. Six term hours.

MR. HILL

15-2 German. Review of grammatical principles, especially with reference to difficulties encountered in translation. Outside reading of modern German texts. Class room work consisting of reading from German scientific works. Three recitations a week. Preparation, elementary entrance credit in German, or 15-1.

First and second term. Six term hours.

MR. HILL

15-3 German. The rapid reading of modern technical prose in contemporary authors. Outside reading of modern novels. Elective for Sophomores, Juniors and Seniors who have passed 15-2 or its equivalent with at least a grade of B. Three recitations a week.

First term. Three term hours.

MR. HILL

15-4. German. Continuation of 15-3. Three recitations a week.

Second term. Three term hours.

MR. HILL

17-I Spanish. Elementary course. The essentials of grammar; reading of modern prose; practice in writing Spanish. Open to those who have received a grade of C or higher in French 13-2, or German 15-2. All others wishing to elect the subject should consult the instructor. Three recitations a week.

First and second terms. Six term hours.

#### 21 DRAWING

21-4 Graphics. Required of those who have had little or no previous instruction in technical drawing. The course consists of exercises in the proper use and care of drafting tools; a thorough study of the principles of orthographic projection with applied problems relating to engineering drawing; isometric and perspective projections. Special attention is given to lettering, tracing, sketching and dimensioning. Three periods a week; two hours each.

First term. Three term hours.

ASSISTANT PROFESSORS ASHLEY and CARROLL.

21-5 Graphics. A study of the principles of descriptive geometry and its application to engineering by the solution of problems in which theory and practice are closely correlated. Three periods a week; two hours each. Preparation, 21-4 or 21-6.

Second term. Three term hours.

ASSISTANT PROFESSORS CARROLL and ASHLEY.

21-6 Graphics. Required of those who have had entrance credit or two or more years of previous instruction in technical drawing. The course consists of applied problems in orthographic projection; isometric and perspective projection; sketching and the reading and translation of drawings. Special attention is given to lettering, tracing and dimensioning. Two period a week; two hours each with preparation.

First term. Two term hours.

ASSISTANT PROFESSORS ASHLEY and CARROLL

21-8 Graphics. A study of the technique of graphic expression and its application in giving such complete and accurate information as is necessary for the practicing engineer. Emphasis is placed on the reading, as well as the making, of such drawings as are used in good practice in order to give familiarity with those methods and idioms of graphic expression which are accepted as standard by most draftsmen. Drafting practice is obtained by making detailed and assembly drawings from such data as will eliminate the possibility of copying. Three periods a week; two hours each. Preparation, 21-4 or 21-6.

Second term. Three term hours.

ASSISTANT PROFESSORS CARROLL and ASHLEY

21-13 Mechanism. An introductory course, conducted mainly by graphical methods, and dealing with the fundamental laws governing the velocity ratio and paths of mechanical movements and their application to velocity diagrams, simple types of gearing, and other modes of transmission. Three periods a week; two hours each. Preparation, 21-4 or 21-6. First term. Three term hours.

ASSISTANT PROFESSORS ASHLEY and CARROLL

#### 25 MECHANIC ARTS

25-2. Woodworking. The course is intended to give a practical knowledge of woodworking hand tools and woodworking machines. Instruction is given in laying out work, sawing, planing, chiseling, boring, fitting, band and circular sawing, and is followed by lathe work, which includes center, chuck and face plate turning. Consideration is given to various commercial processes and manufacturing details. The laboratory work is based upon lectures, notes and class demonstrations. Frequent tests are given to insure a thorough knowledge of the principles involved. Two periods per week; three hours each.

First or second terms, Two term hours,

Mr. Adams

25-3 Pattern Making. This is a laboratory course which comprises a study of the methods and principles of foundry practice leading to a knowledge of the requirements of pattern making. The course in pattern making consists of the layout and construction of split patterns, core boxes and built up work. The requirements of the moulder are constantly kept in mind and the several methods of construction possible in each case are discussed. Modern foundry and pattern shop methods are studied. The work in the shop is based on lectures, assignments from the text and class demonstrations, with frequent tests concerning the work at hand. Two periods per week; three hours each.

First or second term. Two term hours. Preparation 25-2 or its equivalent.

25-8 Metal Work. This course is introduced by work at the forge in bending, drawing, upsetting, welding, tool-dressing, etc., followed by work at the vise in chipping, filing, and fitting. Lathe work, including straight and taper turning, chucking, boring, reaming, and thread cutting; also drilling, planing, shaper and milling-machine work. Textbook; Three periods per week; two of three and one-half hours each and one of one hour.

First term. Three term hours.

Mr. Adams

#### 29 MATHEMATICS

29-3 Freshman Calculus. Fundamental principles. Algebraic differentials and integrals. Differential and integral rate problems. Maxima and Minima. Transcendental functions. Areas. Three periods a week; one hour each.

Second term. Three term hours. Preparation, 29-20.

PROFESSOR RANSOM, ASSISTANT PROFESSOR DILLINGHAM and MR. RICE

29-4 Sophomore Calculus. Review of differentiation and integration. Applications. Summation problems. Use of tables. Centroids, moments and averages. Three hours a week. Preparation, 29:3.

First term. Three term hours.

PROFESSOR RANSOM, ASSISTANT PROFESSOR DILLINGHAM and Mr. RICE

29-5 Junior Mathematics. Approximate integration. Multiple integrals. Taylor's Theorem, and errors. Fourier's Series. Elements of Differential Equations. Three hours a week. Preparation, 29-4.

Second term. Three term hours.

PROFESSOR RANSOM and Assistant Professor Dillingham

29-20 Analysis and Computation. Rounded numbers, trigonometric functions, 4- and 7-place logarithms, slide rule. Plane and right spherical triangles. Graphical representation of functions, typical variables. Rectangular coordinates, straight lines, conic sections and standard curves. Five periods a week.

First term.

PROFESSOR RANSOM, ASSISTANT PROFESSOR DILLINGHAM and Mr. RICE

#### 31 PHYSICS

31-1 Physics. The subjects considered are composition of forces static and kinetic equilibrium, the laws of motion, the energy principle, the simple types of motion including uniform and uniformly accelerated motion, rotation about a fixed axis, simple harmonic motion, and wave motion and resonance; in heat, thermometry, expansion, calorimetry, change of state, transfer, sources, uses, and the laws of thermodynamics. One lecture and two recitations per week. Preparation, 29-20 and entrance Physics.

Second term. Three term hours.

ASSISTANT PROFESSOR MARVIN, MR. POTE, and MR. KNIGHT

31-2 Physics. The subject of heat is carried over from the previous semester. Following this, the subjects considered are: Optics, sources of light, photometry, velocity, reflection, refraction, optical instruments, dispersion, color, interference, diffraction, polarization; in electricity, electrostatics, the condenser, the electric current, Ohm's law and applications,

power, magnetism, the magnetic circuit, electromagnetic induction, the principles of direct and alternating current machines and instruments.

One lecture and two recitations per week. Preparation, 31-1 or 31-31.

First term. Three term hours.

Assistant Professor Marvin, Mr. Pote, and Mr. Knight

31-7 Physics Laboratory. The equivalent of 31-8 and 31-9.

31-8 Physics Laboratory. The first experiments relate to the use of the usual instruments for precise measurement and to the mechanics of solids, liquids and gases. These are followed by experiments in heat, including thermometry, vapor pressure, expansion, calorimetry and mechanical equivalent. The use of graphical methods of interpreting data is taught in connection with these experiments. One three hour period, with one and one-half hours preparation weekly. Preparation, 31-1, or 31-31, simultaneously.

Second term. One and one-half term hours.

Assistant Professor Marvin, Mr. Pote, and Mr. Knight

31-9 Physics Laboratory. The experiments in heat, begun in 31-8, are completed. These are followed by experiments in optics and electricity. The experiments in optics include refraction, elementary spectrum analysis, and optical instruments. The experiments in electricity include measurement of resistance, current, electromotive force, and capacity. One period of three hours, with one and one-half hours preparation, weekly. Preparation, 31-2, or 31-32, simultaneously.

First term. One and one-half term hours.

ASSISTANT PROFESSOR MARVIN, Mr. POTE and Mr. KNIGHT

31-31 Physics. Subjects the same as 31-1, but with one additional recitation per week. One lecture and three recitations per week. Preparation, 29-20.

Second Term. Four term hours.

Assistant Professor Marvin, Mr. Pote and Mr. Knight

31-32 Physics. Subjects the same as 31-2, but with one additional recitation per week. One lecture and three recitations per week. Preparation, 31-31.

First term. Four term hours.

Asssitant Professor Marvin, Mr. Pote and Mr. Knight

#### 35 CHEMISTRY

35-I General Inorganic Chemistry. An introductory course in theoretical and descriptive inorganic chemistry, with a thorough consideration of the simplest carbon compounds and principal technical processes. Three periods a week, two lectures, one three hour laboratory period with conferences.

First and second terms. Six term hours.

PROFESSOR DURKEE, MR. BAKER, DR. CHANDLER and Mr. POULEUR

35-2 Qualitative Analysis for the detection of the metals, a course which includes the experimental development of schemes for the division of the metals into groups, the separation and detection of the metals in each group,—a study of all the chemical changes and analytical details, together with the correct analysis of six known solutions and thirteen unknown. Two periods a week; three hours each; laboratory work and conference. Six lectures.

First term. Two term hours. Professor Durkee, Mr. Baker and
Assistants

35-3 Qualitative Analysis, Advanced, dealing with methods to effect solution of solids, the detection of mineral and common organic acids, the complete analysis of inorganic solids, including mixtures of salts, minerals, alloys, and slags. Three known and thirteen unknown are required, and thorough study of the chemical changes and conditions involved in the analyses. Two periods a week; three hours each; laboratory work and conference.

Second term. Two term hours.

MR. BAKER and ASSISTANT

35-4 Quantitative Analysis. Theory and practice of gravimetric and volumetric analysis, including the determination of chlorine by the ordinary and Gooch crucible methods, iron and sulphur in ferrous ammonium sulphate, silica in a silicate, phosphorus in a phosphate, complete analysis of dolomite, and brass, preparation of strictly half-normal sodium hydroxide and hydrochloric acid solutions, the volumetric analyses of soda ash and oxalic acid, the analysis of iron ore by the dichromate and permanganate methods, determination of chromium in chromite, of antimony by the iodine method, and silver by the sulphocyanate method. Three periods a week; three hours each; laboratory work and conference.

First and second terms. Six term hours.

PROFESSOR DURKEE

35-5 Quantitative Analysis. Technical. Work varied somewhat to meet the needs of individual students. Course ordinarily comprises proximate analysis of coal, nitrogen in coal, by Kjeldahl's method, complete analysis of boiler scale, mineral and sanitary analysis of water, determination of copper in ores by iodine and cyanide methods, of zinc by ferro-cyanide method, complete analysis of Babbitt metal, determination of lead in ores and manganese, sulphur, phosphorus, silicon and carbon in iron and steel. Three periods a week; three hours each; laboratory work and conference.

First and second terms. Six term hours.

PROFESSOR DURKEE

35-7 Fire Assay. A course which deals with the theory and practice of sampling and assaying gold and silver ores. Two periods a week; three hours each; laboratory work and conference.

Second term. Two term hours. PROFESSOR DURKEE and Mr. POULEUR

35-8 Metallurgy of Iron and Steel. Considered largely from the chemical side, and includes the study of ores, fluxes, fuels, furnaces, and the other mechanical devices used in the commercial production of pig iron, wrought iron, and steel, together with the solution theory of iron and steel, heat treatment of steel, and production of malleable cast iron. Two periods a week; one hour each; lectures and recitations.

Second term. Two term hours.

Mr. Baker

35-9 Technical Gas Analysis, by the Orsat, Elliot, and Hempel systems. One period a week, of three hours.

First term. One term hour.

PROFESSOR DURKEE and Mr. POULEUR

35-10 Organic Chemistry. This course consists of lectures, recitations, and laboratory work. It is intended to familiarize the student with the typical compounds of carbon and their more important derivatives. The work in the laboratory includes the preparation of certain of the more important substances referred to in the lectures, and the identification of certain classes of compounds. Four periods a week; three lectures; one three-hour laboratory period.

First and second terms. Eight term hours.

DR. CHANDLER and ASSISTANT

35-11 Theoretical Chemistry. The subject matter of this course consists largely of the principles usually included under the head of Physical Chemistry. The work in the laboratory consists of physical chemical measurements and experiments of a physical chemical nature. Three periods a week, two lectures, one three-hour laboratory period.

First and second terms. Six term hours.

DR. CHANDLER

35-17 Applied Chemistry. A course dealing with the most important applications of inorganic and organic chemistry to manufacturing purposes, such as the production of sulphuric acid, soda, illuminating gas, and sugar. Three periods a week. Two lectures or recitations, and one three-hour laboratory period.

First and second terms. Six term hours.

PROFESSOR DURKEE

35-20 Chemistry. Subjects the same as 35-1, but with one additional recitation per week. Four periods a week, two lectures, one recitation, one three-hour laboratory period with conferences.

First and second terms. Eight term hours.

PROFESSOR DURKEE, Mr. BAKER, Dr. CHANDLER and Mr. POULEUR

35-99 Chemical Engineering Thesis. The development of a Chemical Engineering problem by extended personal research. The head of the department has authority to substitute another engineering subject for the thesis.

Second term. Three to five term hours.

PROFESSOR DURKEE and DR. CHANDLER

#### 41 CIVIL ENGINEERING

41-4 Surveying. The elements of surveying; practice in the field associated with note-taking; mathematics applied to computations of dimensions, areas, and volumes; graphics by plotting, and plan making. Textbook: Tracy's Plane Surveying. Two periods a week; three hours each.

First term. Two term hours.

PROFESSOR SANBORN and MR. BURDEN

41-12 Railroad Surveying. The greater part of the problems selected for this course are based on information secured by the student while engaged in the reconnoissance and preliminary survey of a short line of proposed railroad near the College. These problems consist of the more important ones that daily arise in the practice of the railroad engineer, and they comprise the determination and location of all simple and compound curves that might be required for the final location of any line; the accurate plotting of the survey notes by means of a system of co-ordinates; a preliminary estimate of the materials of construction required, and the completion of all drawings. Text books: Railroad Curves and Earthwork by Allen. Three periods a week; three hours each. Preparation, 41-4.

First term. Three term hours. Assistant Professor Conner

41-13 Railroad Engineering. A thorough analysis, both theoretical and practical, of the transition spiral; the study of earthwork computations, use of the mass diagram, determining cost of overhaul, use and computation of the vertical curve, proper methods of attack in steamshovel work, the design and estimate of trestle construction, of culverts and waterways, and a general treatment of methods employed in locating all structures of standard design that support the roadbed. A brief study is made of the analysis of labor costs, and of the general principles underlying the scientific management of materials and men. Textbooks: The Railway Transition Spiral, by Talbot; American Civil Engineering Pocketbook Three periods a week; one hour each. Preparation, 41-12.

Second term. Three term hours. Assistant Professor Conner

41-14 Railroad Engineering. A recitation course comprising the study of tunnel design, roadbed construction, track materials and track work, frogs and switches, yard and terminal layouts, siding design and construction, signaling and interlocking, equipment and tools, and the general principles of railroad maintenance. Problems are given in the elementary economic principles involved in railroad upkeep, the treatment of ties, and the capitalized comparison of structures. The student may be required to develop a proposed siding both for the design and the actual staking. Textbooks: The American Civil Engineers' Pocketbook. Three periods a week; one hour each. Preparation, 41-13. First term. Three term hours.

ASSISTANT PROFESSOR CONNER

41-17 Railroad Engineering Economics. Lectures and recitations on the economic principles underlying the proper management of all engineering business associated with the location, development, management, and pperation of a railroad. A general outline of the procedure in financing ailroad ventures is given with the attendant principles involved in bonding and underwriting such projects, and their application is fully demonstrated by the solution of typical problems. Text book: Economics of Railroad Construction, by Webb. Three periods a week; one hour each. Preparation, 41-14.

Second term. Three term hours.

Assistant Professor Conner

41-21 Highways. Tests of sand, clay, cements, mortars, and crushed stone. Study of requirements and specifications. Tests of tars, oils, and usphalts. Study of sources, manufacture and requirements. Inspection of a tar refinery and laboratory where commercial methods may be observed.

Field survey for highway location. Study of topography, and conditions affecting location, design of highway, grades, and sections. Field tudy of types of permanent pavements and maintenance with textbook assignments. Text book: American Civil Engineers' Pocketbook. One ecitation and one three-hour laboratory period per week. Preparation, 41-4.

Second term. Two term hours.

MR. BURDEN

41-31 Geodesy. The determination of a true meridian by star and solar bservations, accurate measurement of a base line, of angles in a triangulation system, and the adjustment of observations by the method of least quares. Two periods a week; three hours each. Preparation, 41-4.

Second term. Two term hours. Assistant Professor Conner

41-40 Hydraulic Engineering. Experiments and observations on the ow of water through nozzles, weirs, pipes, canals and water turbines, toether with the study of the associated theory of hydraulics and elementary ater power engineering. Textbook: Elements of Hydraulics, by Slocum. Three periods a week. Preparation, 29:3.

First term; repeated in second term. Three term hours.

PROFESSOR SANBORN

41-41. Hydraulics. A course similar to 41-40 differing from it only length. Specially planned for students in Mechanical and Electrical ngineering. Two periods a week; one hour each. Preparation, 29-21 nd 29-22.

Second term. Two term hours.

PROFESSOR SANBORN

41-43 Hydraulic Measurements. Experiments on weirs, standard ozzles, proportional water meter, impulse water wheel, duplex pump, ad centrifugal pump; river and canal gaugings by current meter. Tests 100 horsepower turbine, 36-inch Venturi Meter, 40-inch riveted pipe,

and 10-foot weir. Textbook: Elements of Hydraulics, by Slocum. Two periods a week; three hours each. Preparation, 41-40.

Second term. Two term hours.

PROFESSOR SANBORN

- 41-46 Water Supplies. The examination of water supplies, quality of water, communicable diseases, purification of water, water supplies, pipes, reservoirs, dams, pumping machinery. Textbook; American Civil Engineers' Pocketbook. Three periods a week; one hour each. Preparation, 41-40. First term. Three term hours.
- 41-47 Water Power Engineering. Water shed areas, stream flow, hydraulics of water wheels and turbines, turbine testing, selection of turbine for given conditions, water-power development and value of privileges. Textbook: American Civil Engineers' Pocketbook and class notes. Three periods a week; one hour each. Preparation, 41-40.

First term. Three term hours.

PROFESSOR SANBORN

41-48 Sewerage. Purification of sewage, design of sewers, forms of construction, modern methods of sewage and garbage disposal, principles of irrigation and drainage. Textbook: American Civil Engineers' Pocketbook. Three periods a week; two hours each. Preparation, 41-46.

Second term. Three term hours.

PROFESSOR SANBORN

41-51 Fire Prevention. Fire streams, fire pumps, meters, pipe systems, including automatic sprinklers, watchman service, public fire departments, fire causes, and fire-proof and slow-burning construction. Recitation and design from field practice. Two periods a week; two hours each. Preparation, 41-40.

Second term. Two term hours:

PROFESSOR SANBORN

41-63 Contracts. The essential elements of all contracts, their formation and modes of discharge, the fundamental principles of successful writing and interpretation of contracts for the erection of engineering works are carefully considered. Commercial contracts are also studied, including contracts of association, of sale, of transportation, and instruments of credit. The duties and legal responsibilities of the engineer as agent, business man, or independent contractor are emphasized, and some practice is had in writing engineering contracts and specifications. Textbook: Contracts in Engineering by Tucker, Elements of Specification Writing, by Kirby. Three periods a week; one hour each.

Second term. Three term hours.

ASSISTANT PROFESSOR CONNER

41-95 Civil Engineering Topics. Presentation and discussion of engineering topics. Textbook: Proceedings of the American Society of Civil Engineers for the present year. Two periods a week; one hour each. Preparation, Junior Civil Engineering courses.

First term. Two term hours.

41-99 Civil Engineering Thesis. A special investigation by research, design, or experimentation. The head of the department has authority to substitute another engineering subject for the thesis.

Second term. Three to five term hours.

PROFESSOR SANBORN and ASSISTANT PROFESSOR CONNER

#### 45 APPLIED MECHANICS

45-1 Applied Mechanics. A course in the strength of materials including the mechanics and design of beams, girders, columns and shafts. Three periods a week; recitations and lectures with numerous problems. Preparation, 29-4 and 45-21.

First term. Three term hours.

PROFESSOR ROCKWELL and ASSISTANT PROFESSOR SMITH

45-2 Applied Mechanics. A course in graphic statics and stresses in simple structures, including also problems in kinetics, work and energy and friction. For students in civil and structural engineering. Three periods a week; recitations and lectures with problems. Preparation, 45-1.

Second term. Three term hours.

ASSISTANT PROFESSOR SMITH

45-3 Structural Mechanics. A treatment of the mechanics of masonry and reinforced concrete structures, including the design of retaining walls, masonry arches, and foundations. Three periods a week; recitations and lectures with problems and designs. Preparation, 45-2 or 45-4.

First term. Three term hours.

PROFESSOR ROCKWELL

45-4 Applied Mechanics. A course in the mechanics of motion, kinetics, work and energy, and friction, including some graphic statics and stresses in simple structures. For students in mechanical, electrical and chemical engineering. Three periods a week; recitations and lectures with problems. Preparation, 45-1.

Second term. Three term hours.

PROFESSOR ROCKWELL

45-12 Applied Mechanics Laboratory. This course deals with the resistance of the materials of construction, and comprises the testing of cast iron, steel, wrought iron, timber, and concrete in tension, compression, and shear, and the determination of the elastic limits, ultimate strengths, and coefficients of elasticity of these materials. One period a week; two hours. Simultaneous with 45-1.

First term, One term hour,

ASSISTANT PROFESSOR SMITH

45-21. Mechanics. An elementary course in the principles of statics, centres of gravity, moments of inertia and simple beams. Three periods a week Preparation, 20-3.

Second Term. Three term hours.

PROFESSOR ROCKWELL and ASSISTANT PROFESSOR SMITH

#### 47 STRUCTURAL ENGINEERING

47-1 Roofs and Bridges. A study of the fundamental principles of Structural Engineering. It includes the theory of algebraic and graphical stress analysis for statically determinate structures, including roofs, bridges, towers, etc., and the design of structural members and details. Three periods a week; lectures and recitations, with problems. Preparation, 45-2 or 45-4. First term. Three term hours. PROFESSOR ROCKWELL

47-2 Theory of Structures. An advanced course in the theory and design of structures. The method of influence lines is used to a considerable extent in addition to the usual algebraic methods. Three periods a week; lectures and recitations, with problems. Preparation, 47-1 and 45-3.

Second term. Three term hours.

PROFESSOR ROCKWELL

47-3 Structural Design. An introductory course in the design of framed structures. It consists of (a) the critical examination of, and report on, some existing structure and (b) the design and detail drawings for a steel mill building. Three periods a week; three hours each. Simultaneous with 45-2. Second term. Three term hours. ASSISTANT PROFESSOR SMITH

47-7 Bridge Design. A course in the design of riveted and pin connected steel bridges. It consists of (a) one complete design of a typical bridge, including a critical study of the important details, carried on under the guidance of the instructor, and then (b) each student is given a different set of data from which he is required to make an independent design and general drawing. Three periods a week; three hours each. Preparation, 47-3. Simultaneous with 47-1.

First term. Three term hours.

ASSISTANT PROFESSOR SMITH

- 47-8 Structural Design. The design of masonry and reinforced concrete structures. Two periods a week; three hours each. Preparation, 45-3. Second term, Two term hours. PROFESSOR ROCKWELL
- 47-95 Structural Topics and Reports. Reports by each student on assigned reading in engineering literature, and on the stability and safety of structures, based on a personal examination by the student. The presentation is by lecture, but a written copy of each report must be left with the department. Two periods a week; one hour each. Preparation, credit in required work of the Junior year.

First term. Two term hours.

PROFESSOR ROCKWELL and ASSISTANT PROFESSOR SMITH

47-99 Structural Engineering Thesis. A single topic is developed by extended research, design, or experimentation.

Second term. Three to five term hours.

PROFESSOR ROCKWELL and ASSISTANT PROFESSOR SMITH

#### 51 MECHANICAL ENGINEERING

51-1 Heat Engineering. This course deals with the generation of steam and its use in the steam engine. It comprises a study of modern types of boilers and their auxiliary apparatus, simple and compound engines, both condensing and non-condensing; a discussion of the elementary principles of thermodynamics and of the use of the indicator in steam engine practice. Some attention is given to the production of gas for power purposes and its use in the gas engine. Three periods a week; one hour each. Preparation, 31-1, or 31-31, and simultaneous with 21-13.

First term. • Three term hours. PROFESSOR CHASE

51-3 Heat Engineering. This course is devoted to the thermodynamics of the steam engine and other heat engines, and includes a study of the properties of steam, gas and air as used in steam engines, turbines, gas engines, air compressors and blowers; also the working fluids and saturated vapors used in refrigeration. The object of the course is to teach the principles, and their application to practical problems. Three periods a week; one hour each. Preparation, 29-4 and 51-1.

Second term. Three term hours.

PROFESSOR CHASE

51-7 Engine Design. The design of the steam turbine, steam engine and gas engine, involving the strength and proportion of parts and including the layout of the valve gear of high speed engines, the Corliss gear and locomotive valve gears. Three periods a week; two hours each. Preparation, 51-3, and simultaneous with 51-15.

First term. Three term hours.

PROFESSOR CHASE

51-8 Power Plant Design. A study of steam power plant equipment, including the selection of boilers and engines; pumps, heaters, condensers; arrangement of piping; chimneys, mechanical draft; mechanical stoking, coal handling. Boiler design, including calculations for one type of boiler. Three periods a week; two hours each. Preparation, 51-7.

Second term. Three term hours.

PROFESSOR CHASE

51-15 Dynamics of Machinery. A graphical and analytical consideration of the transmission of energy in machines and power transmission. The construction of inertia curves and crank effort diagrams applied to the solution of problems relating to fluctuations in speed, flywheels, balancing of moving parts and regulation by governors. Three periods a week; one hour each. Preparation, 21-13 and 45-4.

First term. Three term hours.

PROFESSOR CHASE

51-18 Machine Design. An application of the principles of mechanism and mechanics to the solution of definite problems in the design of representative types of machine. A systematic training of the judgment

is an important part of this course. Three periods a week; three hours each. Preparation, 21-8, 21-13 and 45-4.

First and second terms. Six term hours.

PROFESSOR ANTHONY and Mr. MACNAUGHTON

51-20 Heat Engineering. An elementary course dealing with fuels, combustion, generation of steam in modern power boilers, and its use in simple and compound engines and power plant auxiliaries; also the solution of problems in valve gears. Two periods a week; one hour each, simultaneous with 21-13, and 31-2, or 31-32.

First term. Two term hours.

PROFESSOR CHASE and Mr. MACNAUGHTON

51-21 Mechanical Engineering Laboratory. Efficiency of simple machines; screw threads; hoists, simple, duplex, triplex; transmission of power by belts. The determination of the clearance of engines; valve setting on plain slide valve, riding cutoff, and Corliss engines. Gage testing; the adjustment and use of indicators; testing indicator springs; the use of several types of steam calorimeters; injector test; flow of steam through orifices. The results of all laboratory work are submitted in the form of carefully written reports. Two periods a week; three hours each. Preparation, 51-1.

Second term. Two term hours.

Mr. MACNAUGHTON

51-24 Mechanical Laboratory. This course includes the work now listed under 51-21 with the addition of one hour per week for recitation and conference. Two laboratory periods of three hours each, and one recitation per week. Preparation, 51-1 or 51-20.

First term. Three term hours.

Mr. MACNAUGHTON

51-26 Mechanical Engineering Laboratory. Steam engines, pumps and auxiliary apparatus. Tests on riding cut-off shaft governor and Corliss engines; a  $16 \times 8 \frac{1}{2} \times 9$  duplex steam pump; measurement of water by weir, nozzle and meter; condenser tests; analysis of flue gases. Internal combustion engines. Tests on a 10 H.P. 4 cycle gas engine, 11 H.P. 2 cylinder, 2 cycle gasolene engine, automobile engines and marine type engines, including instruction and practice in their operation. Three periods a week; three hours each. Preparation, 51-3 and 51-21.

First term. Three term hours.

PROFESSOR CHASE, Mr. ADAMS and Mr. MACNAUGHTON

51-28 Mechanical Engineering Laboratory. Tests on a horizontal return tubular boiler; determination of the velocity of steam through ports; coefficients of friction with different oils and friction on different types of bearings; test on a 35-inch exhaust fan; tests on a steam turbine and on an air compressor; test at a 2000 K.W. power station, and

other tests which may be arranged. Three periods a week; three hours each. Preparation 51-26.

Second term. Three term hours.

PROFESSOR CHASE and Mr. MACNAUGHTON

51-95 Mechanical Engineering Topics. A course of lectures by students. Each member of the course chooses three topics from the proceedings of the American Society of Mechanical Engineers. The subjects are presented to the class in the form of lectures, followed by discussion and criticism. Two periods a week. Preparation, Junior Mechanical Engineering courses.

Second term. Two term hours. PROFESSORS ANTHONY and CHASE

51-99 Mechanical Engineering Thesis. An essay based on extended personal research, design, or experimentation. The head of the department has authority to substitute another engineering subject for the thesis.

Second term. Three to five term hours.

PROFESSORS ANTHONY AND CHASE

#### 54 GEOLOGY

54-1 Physical Geology and Geography. Lectures, recitations, and field work. Mainly for those intending to teach. Three periods a week; one hour each; and seven half-day excursions.

Second term. Three term hours.

PROFESSOR LANE

54-5 Physical Geology.

First term. Three term hours.

PROFESSOR LANE

54-23. Economic Geology.

Second term. One term hour.

PROFESSOR LANE

54-24. Historical Geology.

Second term. Two term hours.

PROFESSOR LANE

#### 61 ELECTRICAL ENGINEERING

61-3 Dynamo Electric Machinery. An elementary course dealing with the fundamental principles of dynamo electric machinery and their application in the construction and operation of generators and motors. Some attention is also given to storage batteries, are and incandescent lamps and systems of direct-current distribution. Three periods a week; one hour each. Preparation, 61-20.

First term. Three term hours.

Assistant Professor Munro

61-5 Alternating Current Machinery. A course treating of the theory, construction, and operation of synchronous machinery. Three periods a week; one hour each. Preparation, 61-3.

Second term. Three term hours.

ASSISTANT PROFESSOR MUNRO

61-8 Electrical Laboratory. Electrical measurements and testing, including, in addition to the more common measurements, calibration of instruments, study of arc and incandescent lamps, and direct current dynamos. Three periods a week; three hours each. Preparation, 61-3.

Second term. Three term hours.

ASSISTANT PROFESSORS ROLLINS and MUNRO

61-12 Dynamo Laboratory. Alternating current testing. Three periods a week; three hours each. Preparation, 61-5.

First term. Three term hours. Assistant Professors Rollins

61-14 Electricity. Theory of alternating currents and of alternating current machinery. Three periods a week; one hour each. Preparation, 61-5.

First and second terms. Six term hours. ASSISTANT PROFESSOR BUSH

61-15 Electrical Engineering. A course dealing with the production, transmission, distribution, and utilization of electrical power. Three recitations a week, with solution of assigned problems. Preparation, 61-5.

First term. Three term hours.

PROFESSOR HOOPER

61-16 Electrical Engineering. A continuation of 61-15. Three periods a week; one hour each. Preparation, 61-15.

Second term, Three term hours,

PROFESSOR HOOPER

61-17 Telephone and Telegraph. A course on principles and operation of telephone and telegraph systems. Three periods a week. Preparation, 61-20.

First term. Three term hours.

ASSISTANT PROFESSOR ROLLINS

61-20 Electrical Engineering. An elementary course in the theory and practical applications of electrical engineering, dynamo-electric machinery, electrical instruments, electro- chemistry, electrical transmission of power, and electrical communication. Textbook, problems and written reports. *Preparation*, 31-2, or 31-32.

Second term. Three term hours.

PROFESSOR HOOPER

61-23 Dynamo Design. A course dealing with the application of the laws of electricity and magnetism to the calculations of electrical apparatus. Three periods a week; two hours each. Preparation, 61-5.

First term. Three term hours. Assistant Professior Munro

61-27 Radio-Engineering. An elementary course in wireless telegraphy and telephony. Lectures and laboratory work. As far as practicable the equipment of the American Radio & Research Corporation will be available for purposes of instruction. Open to Juniors and Seniors with approved preparation. Three periods a week.

Second term. Three term hours.

ASSISTANT PROFESSOR BUSH and Mr. POWER

61-96 Electrical Topics. Lectures by students on electrical subjects, followed by discussion and criticism. Three periods a week. Preparation, 61-15.

Second term. Two term hours.

ASSISTANT PROFESSOR ROLLINS

61-99 Thesis. An essay based on some construction, design, or investigation. The head of the department has authority to substitute another engineering subject for the thesis.

Second term. Three to five term hours.

PROFESSOR HOOPER, ASSISTANT PROFESSORS ROLLINS, MUNRO and BUSH

#### 64 MINERALOGY

64-1 Mineralogy and Lithology. Two recitations and four hours laboratory work a week. Preparation, 35-1.

First term. Three term hours.

PROFESSOR LANE

64-1 Mineralogy alone is of use to civil and structural engineers, but those who are looking to mining or chemical engineering should also take 64-2.

[64-2 Crystallography and Advanced Mineralogy. Two lectures and four hours laboratory work a week. Preparation, 64-1.

Second term. Three term hours.

PROFESSOR LANE

#### 81 POLITICAL ECONOMY

81-2 Elements of Economics. Designed especially for students of engineering; aims at a comprehensive study of the elements of economics, with special reference to present day economic and social problems. Text book (Taussig, Principles of Economics), lectures, tests. Three recitations a week.

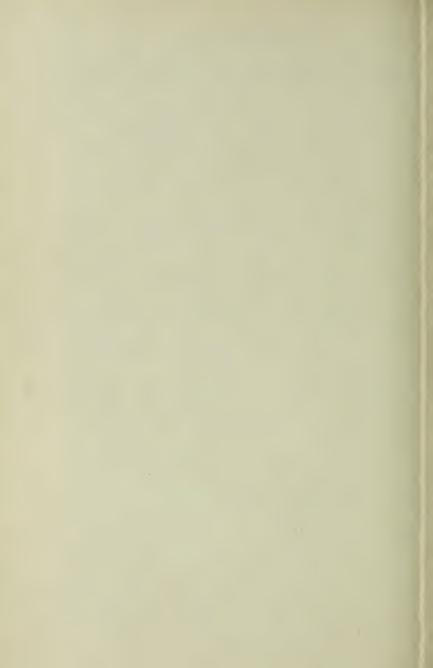
First and second terms. Six term hours.

PROFESSOR METCALF

81-5 Engineering Economics. Designed primarily to study the financial, legal, and operating elements of industrial organizations; the elements of appraisals and valuations; the study and use of the terms, amortization, depreciation, etc. This course is open to students in the Electrical, Mechanical and Chemical courses. Text books: Engineering Economics by Fish; Efficient Cost Keeping. Three hours a week; lectures, tests, problems and reports.

First term, three term hours.

ASSISTANT PROFESSOR CONNER



# THE BROMFIELD-PEARSON SCHOOL

HERMON CAREY BUMPUS, Ph.D., Sc.D., LL.D., President

GARDNER C. ANTHONY, A.M., Sc.D., Dean

# The Bromfield-Pearson School

The Bromfield-Pearson School is intended to meet the wants of young men whose preparation for an Engineering course may be partially deficient in one or more of the required branches, but whose practice and experience in the applied part of Engineering may qualify them to pursue college work while making up these deficiencies. By this means an engineering education is made possible to those who may have been deprived of the opportunities for obtaining the necessary preparation, or who may have allowed considerable time to elapse between the high school and the college course. A mature mind, industrious habits, and appreciation of the value of an engineering education are essential.

#### ADMISSION REQUIREMENTS

Students intending to join the School must obtain from the Dean an application blank, which they are required to fill out and return. On receipt of this statement the Dean will give the conditions of entrance and the program of studies.

No student will be admitted to the School for more than one year.

Students admitted to college classes will be required to obtain a somewhat higher per cent. than the minimum requirement for engineering students.

On the satisfactory completion of one year of work students will be given a certificate of admission to the College. If they have maintained an approved grade in subjects required for the degree they will receive due credit.

The President and the Dean have final authority concerning admission, promotion, and discipline.

For other information address Gardner C. Anthony, Dean of the Bromfield-Pearson School, Tufts College, Mass.

# THE CRANE THEOLOGICAL SCHOOL

LEE SULLIVAN McCOLLESTER, S.T.D., Dean

# Standing Committees

COMMITTEE ON CURRICULUM: Dean McCollester, Chairman; Proessors Cushman and Skinner.

COMMITTEE ON PROMOTIONS: Dean McCollester, Chairman; Profesors Skinner and Mitchell.

# Faculty of the Crane Theological School

HERMON CAREY BUMPUS, Ph.D., Sc.D., LL.D., PRESIDENT

LEE S. McCOLLESTER, S.T.D., DEAN
Packard Professor of Christian Theology

CHARLES H. LEONARD, A.M., S.T.D., LL.D., DEAN, EMERITUS Goddard Professor of Homiletics and Pastoral Theology

WILLIAM H. REED, A.M., RECORDING SECRETARY †

#### Professors

HENRY I. CUSHMAN, A.M., D.D.

Homiletics

HINCKLEY G. MITCHELL, D.D.

Hebrew and Old Testament Exegesis

CLARENCE R. SKINNER, A.M.

Woodbridge Professor of Applied Christianity

#### Instructors

L. ALONZO BUTTERFIELD, Ph.D. Instructor in Oratory

Students in the Crane Theological School are also admitted to classe in the School of Liberal Arts.

#### NON-RESIDENT LECTURERS

FREDERICK A. BISBEE, D.D.

HAROLD MARSHALL

FREDERIC W. PERKINS, S.T.D.

LEVI M. POWERS, S.T.D.

CLARENCE E. RICE, S.T.D.

<sup>†</sup> Ex officio, as Recording Secretary of the Faculty of Arts and Sciences.

# The Crane Theological School

# The Relation of the School to Tufts College

In 1906 the name of the Divinity School was changed to the Crane Theological School, in recognition of a gift of one hundred thousand dollars from the estate of the late Thomas Crane of New York, whose son, Albert Crane, '63, thus carried out the expressed purpose of his father.

The Crane Theological School is one of the coördinate departments of Tufts College. Students of the School are members of the College, enjoying its privileges and subject to its regulations.

#### Outline of Courses

Recognizing that peculiar difficulties and radically new demands confront the Christian minister to-day, Crane Theological School frankly seeks to adapt its discipline to the new conditions. This, quite naturally, has led to the adoption of a distinct and somewhat distinctive ideal or aim. While rigorously faithful to the fundamentals of a liberal culture, and alert to discover and foster special interests and gifts, the primary aim is *practical* rather than *academic*—to turn out, not men distinguished for varied and curious learning, but men thoroughly equipped for moral and religious leadership.

Three courses are presented: one of three years, for students who have already received regular college degrees, leading to the degree of S.T.B.; one of five years, for students who have no degree but have had, or received at Tufts College, the essentials of the College course together with the theological course, leading to the degree of S.T.B.; and one of six years, combining the College and Theological Courses, leading to the two degrees of A.B. and S.T.B.

Students may also enter for special courses.

The number of hours required for the different degrees, and the arrangement of the work depend on the degree or degrees sought. The requirement for the combined course, leading to the two degrees of A.B. and S.T.B., is one hundred eighty-two hours. The subjects are taken from the following list.

Foreign Languages. Hebrew, Greek, Latin, German, French.

Science. Mathematics, Physics, Chemistry, Biology, Geology.

History. Ancient and Modern; Civil and Religious; Apostolic Church; Evolution of Religions.

Bible. Old Testament and New Testament Literature; Theology; Ethics; History; Criticism.

Philosophy. Logic; Ethics; Psychology; Theism: Systematic Theology; Types of Christian Faith.

Sociology. Economics; Applied Christianity; Missions; Social Laboratory; Jesus and Modern Society.

English. Rhetoric; Oratory; Literature; Homiletics; History of Preaching; Liturgics.

Religious Education. Religious Psychology; Religious Pedagogy; Sunday Schools; Pastoral Methods; Church Unity; Scientific Management.

#### Physical Education.

A student taking the six year course must complete the Foreign Languages and Science required for the Bachelor's Degree in the School of Liberal Arts and in addition he must take eighteen hours of History, twenty-one hours of Bible, twenty-one hours of Sociology, twenty-four hours of Philosophy, and thirty-six hours of English.

## Courses of Instruction

In the following list of subjects, the department and name of the officer in charge are first given. Each department has its fixed number and each subject its symbol.—When subjects do not continue through the year, (F) means that they occur in the first term and (S) means that they occur in the second Unless otherwise indicated, instruction in each subject is given three times each week and its credit is three term-hours per half-year. Subjects enclosed in brackets are not offered during the current year.

# 16 ETHICS AND PHILOSOPHY OF THEISM

PROFESSORS — and SCHMIDT

The details of these courses are to be found in the courses offered by the School of Liberal Arts.

- [16-1. (F) Introduction to Philosophy.]
- [16-3. (F) Logic.]
- 16-55. Psychology.
- [16-15. Theism.]

# 56 HISTORY OF RELIGIONS

### PROFESSOR SKINNER

- 56-4. Origin and Development of Primitive Religions; Ethnic Religions; Comparative Religions.
- 56-5. (F) History of the Christian Church to the Protestant Reformation: Development of Theology; Holy Roman Empire; Scholasticism.
- 56-6. (s) History of the Christian Church from the Reformation to the resent time: The Reformation in Germany, Hungary, England, France, etc.; Juritanism; American Sects; Modern Religious Tendencies; Liberal Christianity.
- [56-7. Special Investigations. A research course into Religious Literatre; Archæology; Architecture. Two term hours.]

# 58 OLD TESTAMENT

#### PROFESSOR MITCHELL

- 58-3. The Hebrew Language. First Semester: the elements of ebrew etymology, reading and writing in Hebrew. Second Semester: adings from the books of Judges and Samuel, with notes and references Hebrew syntax.
- 58-6. (F) The Narrative Literature. A comparative study of the historical roks to determine their relative value from the literary, historical, and ligious standpoint. Two term hours
- 58-7. (s) The Prophetic Literature. An examination of selections from works of the principal prophets, to ascertain the literary and doctrinal culiarities of each, and its place in the development of Hebrew prophecy.
- 58-8. (s) The Didactic Literature. The books of Job, Proverbs, and clesiastes, and their significance in the history of Hebrew thought.

- 58-9. (s) The Lyric Literature. Early songs; select psalms of devotional or theological importance; the Song of Solomon and its structure and meaning. Two term hours.
- 58-10. (F) The Ethics of the Old Testament. A survey of the development of moral ideas among the Hebrews, with lectures and papers. One term hour.
- 58-11. (s) Introduction to the Old Testament. An inquiry into the age, and structure, authorship, and history of the several books, with lectures and papers. One term hour.

#### 68 NEW TESTAMENT

# PROFESSORS MITCHELL AND MCCOLLESTER AND ASSISTANT PROFESSOR WYATT

- 68-2. (s) New Testament Criticism: Textual and Historical.
- [68-3. New Testament Exegesis and Theology: Doctrines of Jesus and Paul.]
  - [68-4. New Testament Greek.]
  - 68-5. (s) Life and Teachings of Jesus.
  - 68-11. (s) Life of Jesus: Beginnings of Christian Church.

#### 76 APPLIED CHRISTIANITY

#### Professor Skinner

- 76 7. (s) Social Psychology. A study of the self as a social product, an analysis of group and race characteristics, and of social conduct.
- 76-8. Principles and methods of Social Service, and of practical community leadership. The most important phases of social development are studied in their relation to economic and spiritual forces. Various welfare institutions are visited; brief comments are written upon each; students perform specific service under direction. Two hours class work, one hour field work, per term.
- 76-10. (s) Home and Foreign Missions. The aim is to make the student sympathetic with the motives and movements of missions and cognizant of methods. *One term hour*.
- 76-11. (F) Seminar in Country Church Problems. The country church and its ministry, in relation to rural development. *One term hour*.
- 76-12. Laboratory Social Work. A course in field investigation with an approved social agency, such as Settlements, Charity Organizations, etc. Assigned reading. Conferences with instructor. *Two term hours*.
- [76-13. Race Problems. The history of immigration and an examination of its effects at home and abroad. Discussion of plans for Americanization.]

#### 78 RELIGIOUS EDUCATION

#### PROFESSORS SKINNER and McCollester

- 78-1. (F) Religious Pedagogy. Church, school methods, organization, curriculum, management, and efficiency are studied theoretically and are given practical demonstration. Two term hours.
- 78-2. (s) A course in practical Sunday School teaching. The student is acquainted with the materials and curricula of the graded system and uses them in actual teaching under the criticism and supervision of the instructor. Two term hours.
- 78-3. (F) Applied Religious Psychology. Various phases of normal and abnormal experience are studied and types of Christian character are analyzed. The validity of religious experience is emphasized.
- 78-4. (F) Pastoral Care. Clerical Life and its Problems, Universalist forms, ceremonies, and government, Art in relation to religious effective ness. *Two term hours*.

#### 82 HOMILETICS AND PASTORAL CARE

#### PROFESSORS CUSHMAN and McCollester

- 82-1. Introductory Course in Homiletics. (a) Lectures and recitations on the basis of text book, Hoyt's "The Work of Preaching." (b) Sermon Making. Short extempore and written sermons on texts or topics chosen by students or assigned by the instructor. (c) Cultural study of the words and life of Christ as fundamental preparation for preaching. (d) Conferences.
- 82-2. Advanced course in Homiletics. (a) Lectures and recitations on he basis of text book, Hoyt's "The Preacher." (b) The art of preaching. Practice in the making of sermons, and in their delivery in class. (c) Pasoral Care. Studies in the conduct of Public Worship, and of special services on the basis of Dean Leonard's Book of Prayer. Baptism, Confirmation, he Holy Communion, Marriages and Funerals will be considered; also, 'arish Calls and other pastoral functions with Gladden's "The Christian Pastor" as a book of reference. (d) Conferences.

#### 86 THEOLOGY

#### PROFESSOR McCollester

- 86-1. (s) Historical Introductions to the general subject of Theology.
- [86-2. Systematic Theology: A survey of the general field of Theology; [Iodern Conclusions.]
  - 86-3. Philosophy and History of Universalism: Unitarianism; Congreationalism; Liberal Leaders. Ballou, Channing, Farrar, Emerson. Two ours.
  - 86-4. (F) Systematic Theology.

#### THE PROFESSION OF THE MINISTRY

Lectures are given by clergymen and educators at frequent intervals on ministerial habits, scientific management of parishes, case work, reading courses, church architecture, Universalist polity and interdenominational relations.

#### EXPENSES AND PECUNIARY AID

Tuition in the Crane Theological School is one hundred dollars per annum which gives a student a free room in Paige Hall. Students preparing for the Universalist ministry may obtain scholarships (covering tuition and room in Paige Hall) providing they maintain a high grade in their classes. Incidental expenses are not many and board may be obtained at moderate terms.

A registration fee is required of all students entering Tufts College for the first time.

The income from the following scholarships is available for theological students.

THE GREENWOOD SCHOLARSHIP.

\$1,000

Founded in 1877 by Mrs. Eliza M. Greenwood, of Malden. Given to that member of the advanced class in Homiletics who, maintaining a high standard of work as a student, has made in all the work in Homiletics and Oratory the most satisfactory progress.

THE DOCKSTADER SCHOLARSHIPS.

\$10,000

Founded in 1890 by George A. Dockstader, of New York. Appropriated to the aid of needy and worthy students.

- THE HENRY L. BALLOU SCHOLARSHIP. \$1,000
  Founded in 1897 by Susan Ballou, of Woonsocket, R. I.
- THE BRADLEE SCHOLARSHIPS. (2) \$2,000 Founded in 1897 by Caleb D. Bradlee, D.D., of Brookline.
- THE GOLDTHWAITE SCHOLARSHIPS. (2) \$2,000 Founded in 1897 by Willard Goldthwaite, of Salem.
- THE HOLT SCHOLARSHIP. \$1,000
  Founded in 1897 by Miss Celia Holt, of Stafford, Conn.
- THE WHITTEN SCHOLARSHIP. \$1,000
  Founded in 1897 by Mrs. Maria F. Whitten, of Cambridge.
- THE SARAH ELIZABETH PERKINS SCHOLARSHIP. \$1,000
  Founded in 1898 by James D. Perkins, of Brooklyn, N. Y.
- THE LUCIUS R. PAIGE SCHOLARSHIPS. (2) \$2,000 Founded in 1902 by Lucius R. Paige, D.D., of Cambridge, Mass.
- THE ANN M. PAIGE SCHOLARSHIPS. (2) \$2,000 Founded in 1903 by Ann M. Paige, wife of Rev. Lucius R. Paige, of Cambridge, Mass.
- THE JOHN MURRAY SPRAGUE AND ELIZA FLETCHER SPRAGUE SCHOLARSHIP. \$2,000

  Founded in 1908 by John M. Sprague. Appropriated to the aid of needy and deserving students, preference being given to any student, otherwise eligible, who is a direct descendant of the donor's father, John Sprague.
- THE CATHERINE CONANT SCHOLARSHIPS. (4) \$5,000 Founded in 1910 by Mrs. Catherine Conant, of Newark, N. J.

The General Convention of Universalists aids students by loan scholarships, not exceeding one hundred and twenty-five dollars a year to any one student, subject always to the recommendation of the Faculty of the Theological School.

Students who are in the regular course are permitted to preach, under the direction of the Faculty, during the year-anda-half preceding their graduation.

Students who have to pay their own way through school find many opportunities at Tufts to earn money—and expenses may may be reduced to a low figure.

## THE GRADUATE SCHOOL

CHARLES ERNEST FAY, A.M., LITT.D., Dean

## Standing Committees

EXECUTIVE: President Bumpus, Chairman; Dean Fay and Professor Denison.

REQUIREMENTS FOR DEGREES: Dean Fay, Chairman; Professors Metcalf and Durkee.

## Faculty of the Graduate School

HERMON CAREY BUMPUS, Ph.D., Sc.D., LL.D., PRESIDENT

CHARLES E. FAY, A.M., LITT.D., DEAN Wade Professor of Modern Languages

WILLIAM H. REED, A.M., RECORDING SECRETARY

#### Professors

Arranged in order of their service at Tufts College

WILLIAM L. HOOPER, A.M., Ph.D., LL.D. Electrical Engineering

FRANK W. DURKEE, A.M. Chemistry

LEO R. LEWIS, A.M.

History and Theory of Music

FRANK G. WREN, A.M.

Walker Professor of Mathematics

WILLIAM K. DENISON, A.M.

Latin Language and Literature

\*HENRY C. METCALF, Ph.D.

Jackson Professor of Political Science

WILLIAM R. RANSOM, A.M.

Mathematics

ARTHUR I. ANDREWS, Ph.D.

History and Public Law

KARL SCHMIDT, Ph.D.

Philosophy and Education

LEE S. McCOLLESTER, S.T.D.

Packard Professor of Christian Theology

HERBERT V. NEAL, Ph.D. Zoology

CHARLES H. GRAY, Ph.D. English

<sup>\*</sup> Absent on leave.

## The Graduate School

The Graduate School has control of all advanced work leading to the higher academic degrees.

The advanced elective work offered to undergraduates in any department of the Associated Schools is open to graduate students, and will count for the Master's degree. Graduate courses are arranged with the instructor in whose department the work is to be done, and must be approved by the Faculty of the Graduate School.

#### DEGREES

The degrees offered are Master of Arts and Master of Science. Departments open to candidates are:

ENGLISH
MODERN LANGUAGES
ANCIENT LANGUAGES
PHILOSOPHY AND EDUCATION
HISTORY AND PUBLIC LAW
MUSIC

POLITICAL SCIENCE MATHEMATICS ELECTRICITY BIOLOGY CHEMISTRY

THE DEGREE OF MASTER OF ARTS will be conferred upon graduates of Tufts College who have received the degree of Bachelor of Arts, or upon graduates of other colleges whose course of study has been equivalent to that required at Tufts College for the degree of Bachelor of Arts, upon the following conditions:

- 1. They must have completed an approved course of advanced study, covering the equivalent of at least thirty term hours, in one or at the most two departments. If two departments are chosen they must be allied.
- 2. This course must be pursued during a residence of not less than one year. For graduates of Tufts College, the condition of residence may be waived by special permission, but the degree cannot then be taken with less than two years of graduate study.
- 3. The candidate must prepare a thesis in the form prescribed by the regulations, and must pass a satisfactory examination under the supervision of a board of three examiners, appointed by the Graduate Faculty at its stated meeting on the Friday following the last Monday in May. The thesis must be presented at least one month before Commencement.

- 4. No subject counted for the bachelor's degree will be counted for the master's degree.
- 5. Application for admission to the Graduate School should be made to the Dean in writing prior to September 20 of the college year in which the degree is to be conferred. If the degree is not taken after the first year of study, a second notice must be given at least three months prior to the Commencement at which the degree is expected. The application must specify the department or departments in which it is proposed to pursue work for a degree.

THE DEGREE OF MASTER OF SCIENCE will be conferred upon Bachelors of Science who have pursued advanced study at Tufts College for one year, under the conditions required of candidates for the degree of Master of Arts; or upon any Bachelor of Science of Tufts College who shall pursue graduate study in absentia for at least two years, or who, as an engineer, shall have continued his scientific researches with marked ability for at least three years, holding in the meantime a position of large responsibility. A thesis will be required.

## SPECIFIC REQUIREMENTS IN THE SEVERAL DEPARTMENTS

[For a detailed description of the subjects indicated by their numbers in the following statements, see "Departments of Instruction" in the sections of this catalogue devoted to the School of Liberal Arts and (for Electricity) to the Engineering School.]

English.—It is assumed that candidates for the degree of Master of Arts in English will have already laid a good foundation in English composition and the history of English and American literature. The amount of this work, in general, is that required of a "major student" in the department.—Unless already covered in undergraduate work, the subjects numbered 12-7, -10, -13 to -19, -23 to -25, -29, -34, and -36 may be counted toward the Master's degree, though a higher standard of attainment will be expected than from undergraduates. Part of the work, however, or even the entire work, may consist of a course of independent study of investigative order, under the direction of the department. This may take the form of a discussion of some question in literary history or criticism, or it may consist of an intensive study of an author or a period. A reading knowledge of German and French is usually necessary.

Modern Languages.—A candidate for the Master's degree in this Department must have completed the equivalent of subjects 1 to 3 in both French and German (32 and 22) and 3B and 4 of the language in which the major part of the work is to be performed. The earlier part of the work for candidates who have not taken the more advanced courses is done with undergraduate classes. Of "elementary" subjects only Italian and Spanish may be taken. Graduate students registered in other departments are admitted to such modern language classes as their proficiency may warrant.

Ancient Languages.—A candidate for the Master's degree in Greek or Latin must have completed for Greek subjects 62-1, -2, -3, and -4 or -5; for Latin, 52-1, -2, -3 or -4, and -5. It is desirable that when the degree is sought in one of these languages the other should be taken as a collateral subject. Unless anticipated as undergraduate work, Greek 62-4, -5, -7, Latin 52-3, -4-6, and Classical Archæology 28-1, to -8, may be counted towards the higher degree. Work will be done either in advanced classes with undergraduates or on special lines of investigation approved by the instructor. The thesis will embody the results of the investigation of some author or period, or of some philosophical or archæological subject. A reading knowledge of French and German is indispensable.

HISTORY AND PUBLIC LAW.—Before beginning graduate work in History and Public Law, the candidate must have completed History 36-1 and -2, and Public Law 46-1 or -2, or their equivalent. The advanced subjects enumerated in the catalogue, in so far as they are suited to individual needs, may be offered for the higher degrees, but it is expected that much of the candidate's work will consist of special studies pursued under the direction of the department and of an independent investigation of a definite subject, the results to be embodied in the required thesis. A working knowledge of French is essential, and of German is desirable.

POLITICAL SCIENCE.—When work is done in residence, the advanced courses, such as Business Organization and Management, Problems of Labor and Capital, Railroads, Finance, and Sociology, which have not been counted in undergraduate work, will be counted for the Master's degree. When residence is waived, the work will cover two years of research with stated conferences, the results to be embodied in the required thesis. A good reading knowledge of French and German is desirable, and may in certain lines of work be necessary.

Philosophy.—Some of the prerequisites for advanced work in Philosophy can be stated: a reading knowledge of French and German; Philosophy 16-1 and -2, or their equivalent, and one at least of the following three courses: 16-3, -8, -55, or their equivalent; others depend on the line of work chosen. For example, advanced work in Logic presupposes a knowledge of Mathematics and possibly of Physics. Special requirements will be stated to the student when the field of research is chosen.

Music.—Graduate study in Music may follow one of three lines; Composition, History, or Criticism. The last-named includes advanced work in Musical Appreciation. In preparation for Composition the subjects numbered 38-9 and -10, or their equivalent, must have been completed, together with a year's work either in 38-25 or in the purely technical subjects. A reading knowledge of French and German is indispensable. The required thesis will consist in Composition: of a sonata or a work of similar scope; in History or Criticism, of a paper on an assigned topic.

MATHEMATICS.—Graduate students in Mathematics must have acquired a working knowledge of the calculus, and may offer as part of their work for the Master's degree any of the subjects given by the department except 14-21, -4, -5 and -6, but subjects -7, -9 and -10, or their equivalent, must be included. Candidates will hold themselves in readiness to be examined at the

end of their studies upon any topics treated in the four subejects noted as exceptions, as well as upon work offered for the degree.

CHEMISTRY.—Before beginning graduate work in Chemistry, subjects 35-1, -2 and -3, or their equivalent, must have been completed. Subjects -4 to -17 inclusive may be counted toward he Master's degree if they have not already been counted as a part of undergraduate work. A good reading knowledge of German is desirable, and in certain lines of work necessary.

BIOLOGY.—Before beginning graduate work in Biology, the student must have a good knowledge of the elements of plant and animal morphology and physiology and must have completed subjects 44-3 and -7, or their equivalent. A reading knowledge of scientific French and German is also necessary. The work offered for advanced degrees is in the line of plant animal morphology.

ELECTRICITY.—As a preparation for graduate work in Electricity the candidate must have a good mathematical foundation, including a working knowledge of differential equations, and must have credit in Physics 31-1 and -7, or their equivaent. Of the thirty term hours required, nine may be used in he preparation of the required thesis.

## EXPENSES

The tuition fee for the whole course for the degree of Master of Arts, or Master of Science, is one hundred dollars, payable advance. A registration fee of five dollars is required of all tudents registering at Tufts College for the first time.

## **SCHOLARSHIPS**

In each department offering graduate work the Trustees of ufts College have established one scholarship which gives ee tuition. The incumbent is expected to devote himself excluively to advanced study.

These scholarships are awarded by the Graduate Faculty, or recommendation of the heads of departments concerned, a or before the beginning of the year in which they are to be conferred. Applications must be made to the Dean of the Graduate School.

# ONE-YEAR PRE-MEDICAL COURSE

FRANK GEORGE WREN, A.M., Dean

## Standing Committees

CURRICULUM: Dean Wren, Chairman; Professors Ashley, Bates, Bush, and Lambert.

PROMOTIONS: Dean Wren, Chairman; Professors Ashley, Bush, Lambert, and Seavey.

## Calendar of the Pre-Medical Course

#### 1917

- JAN. 3. Christmas recess ends, Wednesday evening.
- FEB. 22. Washington's Birthday. Exercises are suspended.
- APRIL 18. Spring recess begins, Wednesday evening.
- APRIL 25. Spring recess ends, Wednesday evening.
- MAY 30. Memorial Day. Exercises are suspended.
- JUNE 10, 12, 13, 14, 15. Final examinations.
- June 18-23. Entrance examinations conducted by the College Entrance Examination Board.

## Summer Vacation, Thirteen Weeks

- SEPT. 4. Registration begins.
- SEPT. 6. Examinations for the removal of conditions.
- SEPT. 13, 14, 15. Fall examinations.
- SEPT. 27. Pre-Medical Course begins.
- OCT. 12. Columbus Day. Exercises are suspended.
- Nov. 29. Thanksgiving Day. Exercises are suspended.
- DEC. 19. Christmas recess begins Wednesday evening.

## 1918

JAN. 2. Christmas recess ends, Wednesday evening.

## Faculty of the One-Year Pre-Medical Course

(The address is Tufts College, Mass., unless otherwise indicated.)

## Administrative Officers

HERMON CAREY BUMPUS, Ph.D., Sc.D., LL.D 8 Professors Row President
FRANK GEORGE WREN, A.M 65 Talbot Ave.  Dean of the Faculty of the School of Liberal Arts
Professors
RAYMOND HARMAN ASHLEY, B.S., A.M. Ph.D 8 Ossipee Rd., Chemistry . W. Somerville
GEORGE ANDREW BATES, M.Sc., D.M.D Auburndale Biology
VANNEVAR BUSH, M.S., Eng.D 38 Dearborn St., Medford <i>Physics</i>
FRED DAYTON LAMBERT, A.M., Ph.D 120 Curtis St. Biology
FRANK ELIAS SEAVEY, A.M 45 Sawyer Ave.  English
Instructors
JAMES ANTHONY BRADLEY, A.B 35 Pearl St., Medford Chemistry
IIAROUTIOUN HOVANS CHAKMAKJIAN, A.B 5 Blossom St.,  Chemistry  Allington Heights
ERNEST FLAMMER, B.S 40 Peterborough St., Boston Physics
ARTHUR LEWIS GREELEY, A.B 20 Wescott St., Dorchester Chemistry and Physics
SHIRLEY WILCOX HARVEY, A.B Dean Hall, 6  English
MELVILLE SMITH MUNRO, B.S 101 Talbot Ave.

Physics

FRANCIS O'MEARA, M.S 72 Mapleton St., Branchemistry	righton
FRANK WALTER POTE, B.S 45 Dearborn St., M. Physics	ledfor <b>d</b>
EDWARD EARLE SWAIN, A.M Box 3628, French	Boston
GEORG VAN WIEREN So. Frami	ngham
Assistants	
CHESTER REED EARLE	House
MAHLON GILMAN KNOWLES East English	Hall, 3
LEWIS AARON TENTLER $\Sigma$ T A $\it English$	House

For several years so-called medical preparatory courses have been given at the College. These are regular four-year courses leading to the bachelor's degree, and they will be continued, for the Trustees believe that a full college course is the best preparation for those who are to choose the profession of medicine.

There are, however, many students, young men and women, who cannot afford the time or the expense requisite for the attainment of a college degree. The One-Year \*Pre-Medical Course herein described is designed to meet, in a practical way, the needs of this class, but it should be distinctly understood that the College will not look with favor upon those who comply merely with a minimum of the requirements for admission and yield a low grade of work during the year. The College expects earnestness and proficiency from all its students, and will add to the quantity and quality of the work herein described as it may feel is to the best interests of the student, the School, and the profession.

<sup>\*</sup>Beginning with the year 1917-18 this course will be expanded so that two years will be required for its completion. A special announcement will be issued in March, 1917.

## One-Year Pre-Medical Course

The Association of American Medical Colleges, of which Tufts College Medical School is a member, has voted that students may be admitted to medical schools of "Class A" under the following conditions:

- (a) The student must have completed a four-year course in an accredited high school and
- (b) He must have taken at least a year\* of pre-medical work in an accredited college or university. This course must include Physics, Chemistry, Biology and either French or German.

The Trustees of Tufts College have arranged a One-Year Pre-Medical Course in accordance with this action of the Association of American Medical Colleges.

## REQUIREMENTS FOR ADMISSION

Admission to the first-year class may be obtained in one of two ways:

(1) By presenting a diploma and a transcript of record from an accredited high school or academy:

The transcript of record must show adequate preparation in certain subjects falling in two groups, known respectively as the Required and the Elective Group. In these groups the term "unit" represents a year's study in the specified subjects and is the equivalent of approximately a quarter of a full year's work.

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No subject offered in the Required Group can be counted in the Elective Group.

<sup>\*</sup> Two years after January 1, 1918.

In addition to the eight units of the Required Group candidates for admission must also present subjects chosen from the following Elective Group equivalent to six and one-half units.

## The Elective Group, 61 Units

Units	Units
Greek · · · 2 or 3	Freehand Drawing 12*
Latin 2, 3, or 4	Shop Work 1/2 to 2*
French 2 or 3	Musical Appreciation . ½
German 2 or 3	Music (Harmony) ½
Chemistry 1	Algebra A2 1
Physics	Advanced Algebra ½
Biology	Solid Geometry ½
Botany	Trigonometry ½
Zoology	English History 1
Geology or Geography . 1	Ancient History 1
Mechanical Drawing *1	American History and Civil Government 1

## (2) By passing examinations:

Students who desire to satisfy the above requirements may take the examinations either in June or in September, or a part in June and a part in September.

The June examinations, arranged by the College Entrance Examination Board, will be given June 18 to 23, 1917, at Robinson Hall, Tufts College, Mass., and elsewhere, as announced by the Board. All applications for June examinations must be addressed to the Secretary of the College Entrance Examination Board, 431 West 117th Street, New York, N.Y., and the student intending to take the Board examinations should make his plans known to the Secretary at an early date, if possible prior to May 1, in order to comply with all of the conditions imposed by the Board.

The September examinations are arranged by Tufts College and will be given September 13 to 15, 1917, at Ballou Hall, Tufts College, Mass. On the day of their first examination applicants for the September examinations are required to register at the office of the Registrar at Tufts College and pay an examination fee of \$5.00.

<sup>\*</sup>A total of not more than two units in three subjects.

The schedule of examination dates for September, 1917, is as follows:

- SEPT. 13. Elementary and Intermediate French, 9 to 11; Elementary and Intermediate German, 11 to 1; Elementary and Advanced Greek, Advanced Algebra and Trigonometry, 2 to 5.
- SEPT. 14. Algebra, 9 to 10.30; English, 10.30 to 12.30; Plane Geometry, 2 to 4; Physics, 4 to 5; Drawing, 4 to 6.
- SEPT. 15. Elementary, Intermediate, and Advanced Latin, 9 to 12; Solid Geometry, 9 to 11; Botany, Zoology, Biology, Geology and Economics, 11 to 1; History, 2 to 4; Chemistry, 4 to 5.

The requirements are well known to the principals of all secondary schools.

#### EXPENSES

A fee of five dollars is payable at the time of registration.

The tuition fee of *one hundred and twenty-five dollars* is payable on the opening day, and unless otherwise arranged must be paid in full before October 1.

If desired, however this amount may be paid in two instalments, in which case, an additional charge of five dollars is made and the fees are then paid as follows:

First payment, seventy dollars, payable on or prior to the opening day.

Second payment, *sixty dollars*, payable on or before February 1. Laboratory and anatomical materials are supplied at cost.

#### APPLICATION AND REGISTRATION

A student who intends to enter the One-Year Pre-Medical Course must fill out and send to Frank G. Wren, Dean, 416 Huntington Avenue, Boston, Mass., the accompanying application blank. Duplicate application blanks will be mailed upon request.

Registration for the session 1917–18 will begin at the Medical School Building, 416 Huntington Avenue, Boston, Massachusetts, on Tuesday, September 4, 1917, at 9 A.M. Registration is conducted at the Medical School Building only.

The course begins on Thursday, September 27, 1917, and continues according to the calendar.

## Departments of Instruction

## BIOLOGY

The work in Biology is planned to meet the needs of students preparing to enter upon the study of Medicine. In the study of fundamental biological principles, illustrated by both plants and animals, particular stress is placed on the higher plants and on the vertebrates.

The laboratory work provides opportunity for the student to become acquainted with a series of plant and animal types, and its principal purpose is to train the student in scientific habits of observation and interpretation and to develop his powers of exact and independent thinking.

Four lectures and eight hours of laboratory work each week during the second half-year.

#### CHEMISTRY

This course consists of lectures, laboratory exercises and recitations. The usual college course is followed, and the subject developed in a logical manner with a standard textbook of college grade as a basis. The lectures are parallel with the laboratory exercises which strive to maintain the connection between theory and observed fact. The recitations afford opportunities for clearing up what may seem obscure, while the lectures are formal and accompanied by lecture-table demonstrations.

At an appropriate time, the subject of Qualitative Analysis is taken up by means of lecture and laboratory practice, the course being so shaped that the student should have no trouble in analyzing ordinary mixtures for metals and non-metals.

In the latter part of the college year the subject of Organic Chemistry is studied in order to prepare for physiological chemistry. This is done by means of lectures, laboratory exercises and recitations. The common volumetric operations of acidimetry, alkalimetry and determinations based upon reduction, observation and precipitation are studied and performed.

Three lectures, two recitations and seven hours of laboratory work each week throughout the year.

## LANGUAGES

The courses in French and German are given in order to enable the student ultimately to acquaint himself with the literature of medicine and to read scientific publications in French and German. Elementary, intermediate and advanced subjects are offered in each department, so that the character of the work may be adapted to the qualifications of the individual student. Recitations are held three times each week. Grammatical principles are reviewed and literal translations with a clear understanding of the fundamental meaning of words are insisted upon.

The purpose of the English course is first, to impress on the student the importance of good English; second, to train in exact thinking; third, to develop the power of expression; and fourth, to encourage the habit of reading. The forms of discourse are taken up in weekly lectures, and errors are discussed at monthly conferences held with individual students. Papers written outside the class are required weekly, and papers written in class are required from time to time.

#### PHYSICS

This course consists of lectures, recitations, and laboratory work.

The subjects of mechanics, sound, heat, light, and electricity are covered. As much as possible of the mathematical part of physics is omitted; but special attention is given to topics peculiarly important to the student of medicine. Among these may be mentioned: capillarity, osmosis, diffusion, high frequency electric currents, X-rays, and radio-activity.

The laboratory work is intended to familiarize the student with simple physical apparatus, and the fundamental laws of physics. Written reports upon this work are required. The recitations are devoted to extending this study; and offer an opportunity for frequent short examinations. The lectures treat principally of extensions of the subject which cannot be conveniently studied in the laboratory.

The point of view of the medical student is kept prominently in mind throughout the course.

Two lectures, two recitations, and eight hours of laboratory work during the first half-year.

#### GRADUATION

Before a certificate of graduation can be given, students must fulfil the following requirements:

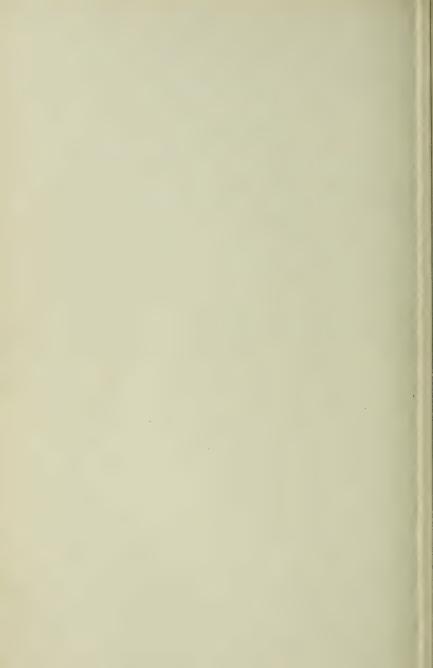
They must have paid all fees.

They must have passed all the required examinations, and have performed the required amount of laboratory work.

They must have completed the full course of pre-medical study.

The Faculty must be satisfied of the good moral character of the student.

The College reserves the right to accept and retain students as it may elect. Regulations are subject to change without notice.



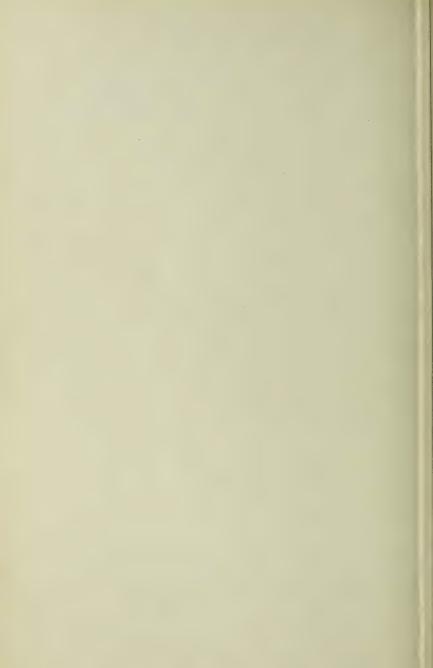
# Application for Admission to the

## Tufts College One-Year Pre-Medical Course

I hereby apply for enforment in the Turts Conege Tre-medical Course
Name in full, including middle name.
Date
P.O. Address; City or Town
State
Street and No.
Date of Birth
Place of Birth
Name of Parent or Guardian
Address of Parent or Guardian
For certificate as to my moral character consult
(Name)
(Address)
Previous education: (State Name of each secondary school and Number of years attended.)
Total years Diploma was received: Date
Diploma was received: Date
I plan to register, in person, at the School Building.
Date:
This application must be accompanied by a certificate of graduation and a full statement of the applicant's secondary school record. These documents must be signed by the school principal.

Answer the above questions fully, clearly, and accurately, and forward to

FRANK G. WREN, Dean, 416 Huntington Ave., Boston, Mass.



## PART II

## THE MEDICAL AND DENTAL SCHOOLS

(Located in Boston)

TUFTS COLLEGE MEDICAL SCHOOL (Giving the degree of M.D.)

TUFTS COLLEGE DENTAL SCHOOL (Giving the degree of D.M.D.)

## Calendar — 1917

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## Calendar of the Medical and Dental Schools

#### 1917

Christmas recess ends, Wednesday Evening. IAN. 3. Washington's Birthday. Exercises are suspended. FEB. 22. Spring Recess begins, Wednesday Evening. APRIL 18. Spring Recess ends, Wednesday Evening. APRIL 25. Memorial Day. Exercises are suspended. MAY 30. Baccalaureate Sermon, Sunday, 4 P.M. JUNE 17.

JUNE 20. Annual Commencement, Wednesday.

JUNE 18-23. Entrance examinations conducted by the College Entrance
Examination Board. Application blanks may be obtained
from the Secretary of the Board, 431 West 117th Street,
New York, N. Y.

## Summer Vacation, Thirteen Weeks

SEPT. 4. Registration begins.

OCT.

Nov.

IAN.

SEPT. 5. Examinations for Advanced Standing and for the Removal of Conditions.

SEPT. 13, 14, 15. Fall examinations for admission. These examinations will be given in Ballou Hall, Tufts College, Mass.

SEPT. 20. Opening Day. College year begins, Thursday.

SEPT. 20. Registration closes, 5 P.M. Thursday. SEPT. 27. Pre-Medical Course begins. Thursday.

12. Columbus Day. Exercises are suspended.

29. Thanksgiving Day. Exercises are suspended.

DEC. 19. Christmas Recess begins, Wednesday Evening.

### 1918

2. Christmas Recess ends, Wednesday Evening.

## Officers of Instruction and Government of The Medical and Dental Schools

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MA	Y MILLER
SA	RAH E. MILLER 206 Massachusetts Ave.  Clerk in the Department of Prosthodontia
MA	RY W. RICHARDSON 884 Huntington Ave. Clerk in the Department of Clinical Dentistry
ES'	THER C. TATTAN
LII	LIAN M. TATTAN
FR	ANCES WILDER 9 Maple St., Chelsea  Clerk in the Department of Operative Technics

. 17 Edgerton Rd., Arlington

MARION VIOLA WILSON . . .

Stenographer

### Tufts College Medical and Dental Schools

The Tufts College Medical School was established in Boston in 1893 and the Dental School, formerly the Boston Dental College, became a part of Tufts College in 1899. Both are administered by the Trustees of Tufts College and are co-educational, women being admitted upon the same terms as men.

### THE MEDICAL AND DENTAL BUILDING

416 Huntington Avenue, Boston, Mass.

The building—at which all exercises are conducted except those given to upper classmen at the hospitals—is equipped solely for the teaching of Medicine and Dentistry and courses connected therewith. There are seven lecture rooms. On the the second, third, and fourth floors, extensive laboratories are provided which give excellent facilities for teaching. Private research laboratories are connected with each general laboratory.

The building may be reached by Huntington Avenue Subway cars, except those on the Roxbury and Dorchester lines.

#### CLINICAL FACILITIES

Boston, as the largest city in New England, offers unusual facilities to the student of medicine. The amphitheatres of the Boston City Hospital, the Massachusetts General Hospital, and the Massachusetts Charitable Eye and Ear Infirmary and other hospitals are open to students, and opportunity is thus afforded for witnessing a great variety of medical and surgical cases.

Clinics available to medical students are held at the institutions given in the following list, and opportunities are also offered at various private hospitals. The clinical advantages offered dental students are exceptional. In addition to the work in the School Infirmary, students are assigned to the dental clinics at the Boston Dispensary, the Hull House Dispensary, the City Institution at Deer Island, the Hood Rubber Co., Watertown, and the Forsyth Dental Infirmary for Children. In these institutions students receive practical instruction under the direction of officers of the School.

Further opportunities for instruction are furnished by the clinics and operations at the large hospitals of the city. Numerous operations upon the face and oral cavity are performed before students, and all connected with the School are urged to avail themselves of the facilities thus offered.

#### LIBRARIES

The students of this School have free access to the Medical School Library, to the Library of Tufts College, to the Boston Public Library, and to the Boston Medical Library.

The Boston Medical Library, which is situated near the School, has one of the largest and most complete collections of medical works in America. All the leading medical journals are on file. The reading rooms are open daily from October 1 to May 31, from 9.30 A.M. to 10.00 P.M., except Sundays and holidays. The hours on Saturdays are from 9.30 A.M. to 6 P.M.

#### **EXPENSES**

A fee of *five dollars* is paid at the time of registration and is non-returnable.

A tuition fee of *one hundred and fifty dollars* is payable on the opening day, and, unless otherwise arranged, must be paid in full before October 1.

If desired, the tuition may be paid in two instalments, in which case an additional charge of five dollars is made, and the fee is then paid as follows:

First payment: — Eighty dollars, payable on or before the opening day.

Second payment: — Seventy-five dollars, payable on or before January 15.

No student will be admitted to the exercises of the first halfyear who has not first paid his registration fee and at least the "First Payment," and no student will be admitted to the exercises of the second half-year who has not paid his fees in full.

Before graduation students are charged two dollars to defray the cost of the diploma.

Students leaving the School have no claim for tuition paid.

The student is charged the cost price of anatomical material.

Students are charged five dollars for material regularly consumed in the chemical laboratory. In addition a deposit of two dollars, subject to adjustment, is required to cover the cost of breakage.

Students who have failed in a subject are required to pay a fee of five dollars for re-examination.

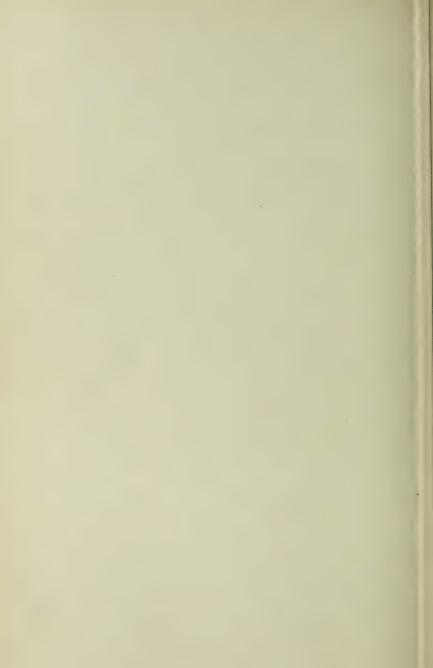
The expenses of living in Boston need not exceed those in small cities and villages. Good board, including room, heat, and light, may be obtained in the vicinity of the School at from \$5.50 to \$7 a week. Students will not be allowed to occupy rooms disapproved by the Faculty.

#### REGISTRATION

The registration period for the session 1917–18 will begin at the Medical-Dental Building, 416 Huntington Avenue, Boston, on Tuesday, September 4, 1917, at 9 A.M.; and must be made in person. Registration is conducted at the Medical-Dental Building only.

#### SESSIONS OF THE SCHOOL

The Medical and Dental school-year will begin on September 20, 1917, and will continue until Thursday, June 14, 1918. Intermissions and other details are given in the calendar.



### MEDICAL SCHOOL

CHARLES FAIRBANK PAINTER, A.B., M.D., Dean FRANK GEORGE WHEATLEY, A.M., M.D., Vice-Dean FRANK EUGENE HASKINS, Ph.G., M.D., Secretary

#### Standing Committees

The Dean, Vice-Dean and the Secretary of the Medical School are members of all standing committees, ex officiis.

Administration. —The President, Drs. Wheatley, Lahey, and Leary.

COURSE OF INSTRUCTION.—The President, Drs. Ames, Lahey, Friedman, Wheatley, Chenery, and Bates.

Women's Advisory Committee. — Drs. Elizabeth A. Riley, Olga Cushing Leary, and Edna Weil Dreyfus.

### The Faculty of the Medical School

#### Administrative Officers

- HERMON CAREY BUMPUS, Ph.D., Sc.D., LL.D. PRESIDENT
- CHARLES FAIRBANK PAINTER, A.B., M.D. Dean
- FRANK GEORGE WHEATLEY, A.M., M.D. Vice-Dean
- FRANK EUGENE HASKINS, Ph.G., M.D. Secretary of the Faculty

#### Professors Emeriti

- FREDERIC MELANCTHON BRIGGS, A.B., M.D. Surgery
- HENRY BECKLES CHANDLER, C.M., M.D. Ophthalmology
- JOHN LEWIS HILDRETH, A.M., M.D., LL.D. Clinical Medicine
- MORTON PRINCE, A.B., M.D., LL.D.

  Neurology
- GEORGE HAMLIN WASHBURN, A.B., M.D.
  Obstetrics
- HAROLD WILLIAMS, A.B., M.D., LL.D.

  Theory and Practice of Medicine

#### **Professors**

- JOHN LINCOLN AMES, A.B., M.D.

  Theory and Practice of Medicine
- ALFRED WILLIAM BALCH, Ph.G., M.D. Biological Chemistry and Toxicology
- GEORGE ANDREW BATES, M.Sc., D.M.D. Histology
- WILLIAM ELISHA CHENERY, M.D. Laryngology
- ELWOOD TRACY EASTON, M.D. Ophthalmology

WILLIAM ROBIE PATTEN EMERSON, A.B., M.D. Children's Diseases

LEO VICTOR FRIEDMAN, A.B., M.D.

Obstetrics

GEORGE WARTON KAAN, M.D.

Clinical Gynecology

FRANK HOWARD LAHEY, M.D. Clinical Surgery

EDWARD BINNEY LANE, A.B., M.D.

Mental Diseases

TIMOTHY LEARY, A.M., M.D.

Pathology, Bacteriology and Medical Jurisprudence

EDWARD HORTON LIBBY, A.B., M.D.

Theory and Practice of Medicine

EDWARD OSGOOD OTIS, A.B., M.D. Pulmonary Diseases and Climatology

CHARLES FAIRBANK PAINTER, A.B., M.D.
Orthopedic Surgery

EDWARD MARWICK PLUMMER, M.D. Otology

ANDREW HOWARD RYAN, M.D.

Physiology

WALTER EDWARD SULLIVAN, Ph.D.

Anatomy

FRANK GEORGE WHEATLEY, A.M., M.D.

Materia Medica and Therapeutics

CHARLES MELVILLE WHITNEY, M.D.

Genito-Urinary Diseases

#### Associate Professors

HARLES HERVEY BAILEY, A.B., M.D.

Histology

RTHUR LAMBERT CHUTE, M.D.

Genito-Urinary Surgery

VALTER ELMORE FERNALD, M.D.

Mental Diseases

LLEN GREENWOOD, M.D.
Ophthalmology

EDGAR MILLER HOLMES, M.D. Otology

STEPHEN RUSHMORE, A.B., M.D. Gynecology

#### Assistant Professors

ARTHUR EVERETT AUSTIN, A.B., M.D.

Clinical Medicine and Lecturer in Gastro-Intestinal Diseases.

ELMER WALTER BARRON, A.B., M.D. Children's Diseases

ARIAL WELLINGTON GEORGE, M.D. Roentgenology

FRANK EUGENE HASKINS, Ph.G., M.D.

Materia Medica and Therapeutics

ARTHUR RONALD KIMPTON, M.D. Surgery

CHARLES DAVISON KNOWLTON, M.D.

Theory and Practice of Medicine

OLGA CUSHING LEARY, M.D.

Pathology and Bacteriology

FRANCIS PATRICK McCARTHY, M.D.

Pathology and Bacteriology

FRANCIS HENRY McCRUDDEN, B.S., M.D.

Applied Therapeutics

THOMAS JAMES O'BRIEN, M.D. Clinical Medicine

WALTER FREEMAN NOLEN, M.D.

Anatomy

ALONZO KINGMAN PAINE
Obstetrics

CADIS PHIPPS, A.B., M.D. Clinical Medicine

LOUIS MAHLON SPEAR, A.B., M.D.

Theory and Practice of Medicine

ALBERT WARREN STEARNS, M.D.

Neurology

FRANK PERCIVAL WILLIAMS, M.D. Surgery

### The Medical School

# REQUIREMENTS FOR ADMISSION TO COURSES LEADING TO THE DEGREE OF DOCTOR OF MEDICINE

The following requirements for admission to the Medical Courses are in accordance with the rules which, as adopted by the Association of American Medical Colleges, control admission to medical schools of "Class A."

Admission to the first-year class may be obtained in two ways. In either case the applicant should file the accompanying blank.

#### 1. For Those Having Collegiate Degrees

The candidate for admission must present satisfactory evidence that he is a graduate of an accredited college or university and has received the bachelor's degree. He must have had courses in Physics, Biology, Chemistry, and a Modern Language, each sufficient in amount to be the equivalent of one year of work as given in approved colleges.

A student entering Tufts College as a freshman may combine his collegiate and medical school courses so that in seven years he can take both his bachelor's and his doctor's degrees.

Work for the first three years is pursued in the School of Liberal Arts, and for the remaining four in the Medical School. At the end of the fourth year the bachelor's degree may be conferred, and at the end of the seventh year the degree of Doctor of Medicine.

#### 2. For Those Without Collegiate Degrees.

The candidate for admission in September, 1917, must present evidence that he has completed a Pre-Medical Course of at least one year's work in an accredited college or university, including Physics, Chemistry, Biology, and German or French courses.

The candidate for admission in September, 1918, must present evidence that he has completed a Pre-Medical Course of at least two year's work in an accredited college or university, including the courses above mentioned. Therefore those who intend to enter the Medical School in September, 1918, must have begun their Pre-Medical Course in or prior to September, 1916.

Information concerning the Pre-Medical Course given by Tufts College, and the conditions of entrance thereto, is given in this publication.

## ADMISSION TO ADVANCED STANDING AND REMOVAL OF CONDITIONS

Students who have taken courses in other accredited medical schools may be admitted to advanced classes upon presenting satisfactory evidence, by credentials or by examination, that they are qualified.

Examinations to establish this qualification are given at the Medical-Dental Building, on a schedule arranged by the Secretary, and begin on Wednesday, September 5, 1917.

Students from other colleges intending to take examinations for admission to advanced standing and those who desire to remove conditions are required to notify the Secretary on or before Tuesday, September 4, 1917.

Before taking these examinations each student must register by signing his name on the registration blank provided for the purpose. If a student fails to register in this manner, he will receive no credit for his examination.

#### OUTLINE OF COURSES

# First Year

1 1/31 00	77663667	
Descriptive Anatomy	Twenty-two hours	a week
Histology	Twelve hours	a rveek
Second S	Semester	

Physiology
Twenty hours a week
Descriptive Anatomy
Two hours a week
Two hours a week

#### Second Year

The following subject i	is giv	en	tinough	out the	SCIR	JOI-ye	aı	•
Physical Diagnosis					Trvo	hours	a r	week
	First	Sei	mester					
D-41-1 1 D-4				77		7		

Pathology and Bacteriology	Twenty-seven	hours a week
Second Semester		
Biological Chemistry	Twenty-four	hours a week
Pharmacology	Eight	hours a week
Bandaging and Surgical Technique	Troo	hours a week
Toxicology	Two	hours a week

### Application for Admission

#### to the

### Tufts College Medical School

I hereby apply for enrollment in the Tufts College Medical School as a candidate for the degree of M.D.
Name in full
P.O. Address: Street and No.
City or Town
State
Date of Birth
Place of Birth
Parent or Guardian
For certificate as to my moral character consult
(Name)
(Address)
Secondary Schools. (State Name and Number of years attended.)
Total years Diploma was received. Date
I plan to register, in person, at the Medical School

I. This section is to be used by those applying for admission "On a Collegiate Degree."
Name of College or University from which you have received your degree
Dates of Entrance and Graduation
Degree received
The applicant must attach a certificate of graduation, duly signed by an officer of the college from which he has graduated, stating that he has satisfactorily completed work in Chemistry, Physics, Biology, and French or German equivalent in amount to that given in the One-Year Pre-Medical Course at Tufts College, or as defined by the Association of American Medical Colleges.
II. This section to be used by those who apply for admission "Without Collegiate Degree."
Name of College or University in which you have taken your Pre-Medica
Course
Dates of beginning and ending Pre-Medical Course

The applicant must attach a letter of honorable dismissal and a transcript of record reciting the amount and quality of his work and his standing in the following subjects: Physics, Chemistry, Biology, and either French or German. This letter must be signed by an officer of an accredited college or university.

This application should be forwarded to

FRANK E. HASKINS, M.D., Secretary,
Tufts College Medical School,
416 Huntington Ave., Boston, Mass.

#### Third Year

The following	subjects are	given	throughout	the	school-year.

Theory and Practice of Medicine

Clinic

Three hours a week

Equivalent to three hours a week

Clinic Equivalent to three hours a week

Surgery Six hours a week

Surgery
Six hours a week
Clinic
Equivalent to three hours a week

Obstetrics Three hours a week

Clinic (delivery of six cases) Equivalent to two hours a week

Laryngology Two hours a week

Clinic Equivalent to one hour a week

Diseases of Children One hour a week

Clinic Equivalent to one hour a week

 Medical Diagnosis
 One hour a week

 Clinic
 Equivalent to one hour a week

Genito-Urinary Diseases

Clinic Equivalent to one hour a week

Ophthalmology One hour a week

First Semester

Hygiene and Sanitation Two hours a week

Neurology Two hours a week

Pulmonary Diseases
Clinic Equivalent to one hour a week

Second Semester

Hematology One hour a week

Pulmonary Diseases One hour a week

Clinic Equivalent to two hours a week

Gynecology Three hours a week

Genito-Urinary Diseases One hour a week

Ophthalmology

Clinic Equivalent to one hour a week

#### Fourth Year

The following subjects are given throughout the school-year:

Clinical Medicine Four hours a week

Clinic Equivalent to one hour a week

Clinical Surgery Five hours a week

Clinic Equivalent to one hour a week

Orthopedic Surgery

Clinic

Applied Therapeutics

Clinic

Clinical Medicine Diseases of Children

Clinic

Medical Jurisprudence

Dermatology Clinic

Operative Surgery and Surgical Anatomy—Demonstrations.

First Semester

Neurology Clinic

Otology Clinic

Roentgenology

Two hours a week

Three hours a week

One hour a week

Two hours a week

One hour a week

One hour a week One hour a week

Equivalent to one hour a week

Three hours a week

Equivalent to one hour a week One hour a week

Second Semester

Operative Obstetrics—Demonstrations. Clinical Gynecology—Demonstrations.

Mental Diseases

Clinic

One hour a week

Equivalent to one hour a week

### Description of Four-Year Course of Study

(Leading to the Degree of Doctor of Medicine)

It is the plan of this course, which requires four years of residence, to correlate the classroom work of the first two years with the practical hospital experience of the third and fourth years, leading thus to a well-rounded medical and surgical training. The morning work of the fourth year is largely clinical, the students being assigned in sections for practical work in Hospital and Out-Patient Clinics.

#### ANATOMY

Dr. SULLIVAN

Dr. HEPBURN

Dr. NOLEN

The anatomical laboratory is equipped with charts, models and regional dissections for demonstrations. A departmental library is maintained for the students.

Descriptive Anatomy. This is a laboratory course on the cadaver. Each student dissects a lateral half of the body. Lectures, demonstrations and recitations supplement the laboratory work.

**Applied Anatomy.** It is planned to give a course which will correlate the descriptive anatomy with clinical work. This course will require ten hours per week for one half-year.

### Statement of Expenses Incidental to Work in Anatomy

Dissecting material \$15.00 Laboratory coat \$1.25
Dissecting instruments \$5.00-\$8.00 Text-books \$7.00-\$15.00
Bone deposit \$5.00

#### HISTOLOGY

Dr. BATES

Dr. Adams Dr. Bailey Dr. RUBIN
Dr. SPRAGUE

The course in Histology is carried on during the first semester of the first year. It consists of lectures and laboratory work in microscopic anatomy.

#### PHYSIOLOGY

Dr. RYAN

Instruction is based, as far as possible, on observations made in laboratory experiments and demonstrations. The experiments are selected to impress the student with the methods of investigation, and the most important facts in the various divisions of the subject, to wit: muscle, nerve, electro-physiology, circulation, body fluids, respiration, secretion, digestion, absorption, metabolism, nutrition, internal secretion, central nervous system, and the senses. Physiologic processes not readily observed in the laboratory, the student learns with an insight derived from the practical grounding in experimentation.

In the laboratory students work in groups of two or three, each group being provided with a desk completely equipped with apparatus and wired for electric power and chronometer current. Experiments requiring a greater number of students for their manipulation are carried out in groups of eight or nine. Experiments requiring special apparatus are performed in small sections, the work being arranged for rotation of the sections. For such experiments rooms are provided adjacent to the main laboratory. Each student is required to preserve a record of his experiments and observations.

The facts observed in the laboratory are discussed in lectures, quizzes and theses. In the lectures free use is made of charts, models and projection lantern. In the thesis prepared by the student on selected subjects, reference is made to original papers to be found in the library.

Weekly oral quizzes are supplemented by written tests given upon completion of some general division of the subject.

Text books: Stewart's Manual of Physiology; Howell's Text Book of Physiology; Starling's Human Physiology. For laboratory, mimeographed notes.

Elective work: To be arranged. For students desiring special training in this subject.

Research: The facilities of the department are given to properly qualified applicants.

#### **EMBRYOLOGY**

Dr. BATES

The course will cover the science so far as to fit the student with knowledge sufficient for his studies in obstetrics, and such other departments as may deal with embryonic conditions.

#### PATHOLOGY AND BACTERIOLOGY

Dr. LEARY

Dr. Dunbar Dr. King
Dr. Dwyer Dr. McCarthy

Dr. Guthrie Dr. Olga Cushing Leary

Dr. WATSON

Miss Fritz Miss Pews

The instruction in Pathology consists of lectures, recitations, and demonstrations of fresh and museum specimens, supplemented by experiments and practical laboratory work in pathological histology.

Instruction in autopsy technique is carried out in the amphitheatre of the school and the amphitheatre of the Southern District Mortuary. The supply of fresh material, both surgical and autopsy, is relatively large and it is usually possible to illustrate most of the common disease processes and many of the rare lesions.

Bacteriology is taught as a companion study to Pathology. As infectious processes are taken up, the bacterial causes are studied in connection with the pathology of the disease which they produce and demonstration is made of experimental lesions produced by the important pathogenic bacteria.

Immunology is taught by lectures, recitations and practical laboratory work.

#### BIOLOGICAL CHEMISTRY

Dr. Balch

Dr. MacGray Dr. Reis Dr. Thorpe

The course in Biological Chemistry begins with a study of the carbohydrates, proteins and fats. Then follows consideration of Chemical Physiology and Chemical Pathology of the human body.

Special attention is given to the chemistry and microscopy of urine, feces, blood and gastric contents. A large part of the laboratory work is devoted to these exercises.

Diagnosis of renal, gastric and intestinal diseases from chemical and microscopic findings is fully considered.

#### PHARMACOLOGY

Dr. F. G. WHEATLEY

Dr. Caines Dr. Funnell Dr. Haskins Dr. McCrudden

This course consists of lectures, recitations and laboratory exercises.

Special attention is given to the physiological action of drugs and to their therapeutical applications as indicated by clinical experience and by physiological and pathological conditions. The laboratory course is designed to familiarize the student with medicinal preparations. Prescription writing receives careful attention, and both the metric and apothecary systems are used. Recent additions in materia medica receive due consideration.

**Applied Therapeutics.** Fourth year students, in small sections, are given an opportunity to observe the results of the application of therapeutical agents.

#### TOXICOLOGY

Dr. BALCH

Dr. MacGray Dr. Reis Dr. Thorpe

The course in Toxicology is systematic and comprehensive. Students are required to determine the identity of various organic and inorganic poisons in stomach contents, tissues and in food.

In addition to the regular recitations, there are occasional conferences at which cases of poisoning are discussed.

#### MEDICINE

	Dr. AMES	
Dr. AUSTIN	Dr. Keleher	Dr. Powers
Dr. Barker	Dr. KELLEY	Dr. Place
Dr. Barron	Dr. Kent	Dr. PREBLE
Dr. Behrman	Dr. Knight	Dr. RILEY
Dr. BERLIN	Dr. KNOWLTON	Dr. Seavey
Dr. Burnham	Dr. Lane	Dr. Spear
Dr. Burns	Dr. Libby	Dr. Stearns
Dr. Dana	Dr. MacLennan	Dr. Stetson
Dr. EMERSON	Dr. E. MARTIN	Dr. STURNICK
Dr. FERNALD	Dr. H. W. MARTIN	Dr. Taft
Dr. George	Dr. Morrison	Dr. WATTS
Dr. HALLISEY	Dr. O'BRIEN	Dr. WHITE
Dr. Houghton	Dr. Otis	Dr. Wood
Mr. INGHAM	Dr. PHIPPS	

The Department of Medicine receives the students in the second year, after they have completed courses in Anatomy, Physiology and Histology.

Physical Diagnosis. During the second year the students meet in small groups at the out-patient departments and in district visits, and are given instruction of a practical nature in "history taking" and "physical diagnosis." In this course only the minor medical disturbances are, as a rule, considered.

Theory and Practice of Medicine. The instruction consists of clinical lectures delivered to the entire class at the hospitals and in small sections at ward visits where diseased conditions are followed in their various stages.

Diseases of Children. This course is conducted by lectures given at the Medical School and at clinics given at the hospitals.

Medical Diagnosis. The students are shown the methods of clinical investigation, differential diagnosis and the gross pathological lesions.

**Hematology.** A laboratory course in the examining of the blood, involving practical work with the microscope.

Pulmonary Diseases. Pulmonary Diseases are considered as cognate parts of internal medicine and assigned their proper proportion of time for didactic and clinical instruction by the department.

**Neurology.** This course is conducted by Dr. John J. Thomas, whose lectures are followed by clinical work in the Boston City Hospital under the direction of Dr. Fairbanks and Dr. Coriat.

Hygiene and Sanitation. Hygiene and Sanitation are conducted during the first half of the third year.

Genito-Urinary Diseases. This course is given by Dr. Whitney and Dr. Chute. It consists of lectures supplemented by clinical work at the Boston Dispensary and Mt. Sinai Hospital.

Clinical Medicine. Clinical Medicine is continued in the fourth year in a practical manner by the appointment of students as clinical assistants in the out-patient departments and in the wards of hospitals.

Medical Jurisprudence. This course, which consists of a series of lectures, extends throughout the fourth year, and is given by Dr. F. J. Keleher.

Rectal Diseases. This course is given by Dr. Frank P. Williams. It is introduced by a series of lectures and is continued by clinical demonstrations at the Boston Dispensary.

**Neuropathology.** Dr. Tower gives a series of illustrated lectures on the pathology of the nervous system which is subsequently illustrated by cases at the Boston City Hospital.

Mental Diseases. The College has exceptional facilities for instruction in this subject. A course of lectures is given by Dr. E. B. Lane and clinical opportunities are available at several of the larger hospitals.

SUI	RGERY
Dr.	LAHEY

Dr. Breslin	Dr. Goddu	Dr. Pearce
Dr. Cochrane	Dr. HEGARTY	Dr. Rogers
Dr. Coues	Dr. HEPBURN	Dr. Shapira
Dr. CHUTE	Dr. Janes	Dr. TINKHAM
Dr. CROSBIE	Dr. Jantzen	Dr. WALKER
Dr. Dolan	Dr. KIMPTON	Dr. WHITNEY
Dr. FRASER	Dr. LEAVITT	Dr. WILLIAMS
Dr Cippings	Dr PAINTER	

Bandaging and Surgical Technique. The Department of Surgery first comes in contact with the students in the second year after they have had their descriptive Anatomy and Dissection, Physiology and Histology. In small sections at the several surgical out-patient departments, they are taught the principles of asepsis and antisepsis. At operations, they are taught something of the technique of minor surgery and receive practical instruction in the art of applying surgical dressings and in bandaging. Correlated with the second year of surgical instruction it is planned to give a course in Applied Anatomy.

Surgery. In the third year instruction by didactic and clinical lectures begins. The former are given at the Medical School and the latter at the hospitals. The clinical work is conducted chiefly by class demonstrations upon surgical patients and mainly with a view to diagnosis and treatment. This work is supplemented by ward visits in small groups where the results of treatment are demonstrated and post-operative care is illustrated. Correlated with this clinical instruction there is a laboratory course in Surgical Pathology in which the pathological changes of the principal surgical lesions are demonstrated and the repair processes incident to the recovery from surgical affections are followed.

Clinical Surgery. In the fourth year, clinical lectures are continued. Fifteen lectures on special surgical subjects are given by men not connected with the faculty but particularly qualified to speak on these subjects. Practical out-patient work is required of each student for a month in minor surgery, in genito-urinary surgery and in orthopedics respectively.

Operative Surgery and Surgical Anatomy. The course in operative surgery upon the cadaver is essentially a course in surgical anatomy and in practical operative surgery.

Opportunity to witness major surgical operations in the large hospitals is open to the students on public operating days.

#### GYNECOLOGY AND OBSTETRICS

Dr. Kaan	Dr. Friedman	Dr. Rushmore
Dr. Brant	Dr. Grant	Dr. PAINE
Dr. Darling	Dr. Jackson	Dr. Phaneuf
Dr. Gay	Dr. MacCormack	Dr. Twombly

The work of the two departments is administered as a unit.

**Gynecology.** During the third year, second semester, there are three exercises (two lectures and one quiz) each week in Gynecology. The students in small sections, throughout the fourth year, are given instruction in the making of examinations, and in methods of diagnosis and treatment.

Obstetrics. The instruction in Obstetrics consists of lectures, recitations, and clinical teaching. Each student is given the opportunity to serve as externe in the Obstetric Out-Patient department, where he personally delivers the six cases required for the degree. He is required to care for these cases during convalescence and to write a detailed report.

For the women students, arrangements have been made with the New England Hospital for Women and Children whereby each student attends her required number of confinements.

Operative Obstetrics. All the important obstetric operations and operative manœuvres are demonstrated to the class in small sections, and each student performs these operations on models under the guidance of the instructor. This individual teaching constitutes a highly valuable and practical experience.

Clinical Gynecology. This instruction is give at the clinics of the Dispensary for Women, at the Boston Dispensary, and at St. Elizabeth's Hospital. Adequate provision is made for students to witness plastic operations and major pelvic surgery at the Carney Hospital. Weekly class conferences are held during the second semester.

#### OPHTHALMOLOGY

Dr. Greenwood

Dr. EASTON

Dr. ELLIS

The course in ophthalmology is of a practical character being designed to give the general practitioner such knowledge of the subject as is most essential to his practice.

#### OTOLOGY

Dr. PLUMMER

Dr. DRURY

Dr. HOLMES

Instruction in otology consists of lectures on the anatomy, physiology, and pathology of the ear, and the student must prepare a dissection and model of the human ear. The lectures are illustrated by models, anatomical specimens, bone-corrosion preparations, and by microscopical sections of the organ of hearing.

#### LARYNGOLOGY

Dr. CHENERY

Dr. ARKIN

Dr. TILTON

Dr. VOGEL

Dr. Heffernan Dr. Tolman, Jr.

Third year students are given during the first semester a systematic course of lectures, illustrated by colored diagrams, models, pathological specimens and instruments.

Clinical laryngoscopy and rhinoscopy are required throughout the year. By practical examination the technique of instrumentation is taught as well as general diagnosis and treatment. The student is made familiar with ordinary diseases of the nose and throat and sees the more important operations.

#### DERMATOLOGY

Dr. KEANY

Dr. THORNDIKE

The instruction in dermatology consists of weekly lectures to the fourth-year students. Diseases of the skin are shown to the class at the Boston City Hospital. Opportunity is given for each student to examine the cases personally.

#### ROENTGENOLOGY

Dr. GEORGE

The School is well equipped with apparatus for making X-ray examinations. Lectures are given to the members of the fourth year class and students especially interested are given facilities of exceptional value at hospitals and private offices.

### General Information

#### TERM EXAMINATIONS

Regular examinations for promotion and for graduation are held at the end of each course.

In all examinations (except those for entrance) each student must register by signing his name on the registration blank provided by the Secretary for that purpose.

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#### GRADUATION

Before the degree of Doctor of Medicine can be conferred, the candidates must fulfil the following requirements:

- 1. They must have paid all Medical School charges including the cost of diploma.
- 2. They must furnish a certificate that they are at least twenty-one years of age.
- 3. They must have passed all the required examinations, and have performed the required amount of laboratory and clinical work.
- 4. They must have attended for four college years some accredited medical college, the last of which must have been at this School as members of the fourth-year class.
  - 5. They must be of good moral character.

#### HONORS

Students who have attended this School for three years, and have obtained an average of ninety per cent. in their first examinations, shall be eligible to "summa cum laude," and those who have obtained an average of eighty per cent. shall be eligible to "cum laude."

Students who have failed in any examination are not eligible for honors.

Degrees are publicly conferred on Commencement Day at Goddard Chapel, Tufts College.

The College reserves the right to accept and retain students as it may elect. Requirements and regulations are subject to change without notice.

### DENTAL SCHOOL

CHARLES FAIRBANK PAINTER, A.B., M.D., Dean FRANK GEORGE WHEATLEY, A.M., M.D., Vice-Dean FRANK EUGENE HASKINS, Ph.G., M.D., Secretary

#### Standing Committees

The Dean, Vice-Dean and the Secretary of the Dental School are members of all Committees, ex officiis.

ADMINISTRATION.—The President, Drs. Bates, Johnson, Farris, Strout, Keltie, and Rice.

ADMISSION.—Drs. Leary, Bates, and Professor Wren.

LIBRARY.—Drs. Bates and Houston.

INSTRUCTION.—Drs. Johnson and Bates.

Women's Advisory Committee.—Drs. Elizabeth A. Riley, Olga Cushing Leary, and Edna Weil Dreyfus.

### The Faculty of the Dental School

#### Administrative Officers

HERMON CAREY BUMPUS, Ph.D., Sc.D., LL.D. PRESIDENT

CHARLES FAIRBANK PAINTER, A.B., M.D.

Dean

FRANK GEORGE WHEATLEY, A.M., M.D. Vice-Dean

FRANK EUGENE HASKINS, Ph.G., M.D. Secretary

#### Professors Emeriti

FREDERIC MELANCTHON BRIGGS, A.B., M.D. Surgery

HAROLD WILLIAMS, A.B., M.D., LL.D. Theory and Practice of Medicine

#### **Professors**

GEORGE ANDREW BATES, M.Sc., D.M.D.

Histology

WILLIAM ELISHA CHENERY, A.B., M.D.

Oral Surgery

FRANK ALEXANDER DELABARRE, A.B., D.D.S., M.D. Orthodontia

ERVIN ARTHUR JOHNSON, D.M.D. Clinical Dentistry

JAMES KELTIE, D.D.S.

Crown and Bridge

TIMOTHY LEARY, AM., M.D.

Pathology, Bacteriology and Medical Jurisprudence

WILLIAM RICE, D.M.D.

Operative Dentistry

ANDREW HOWARD RYAN, M.D.

Physiology

BYRON HOWARD STROUT, D.D.S. Operative Technics

WALTER EDWARD SULLIVAN, Ph.D. Anatomy

FRANK GEORGE WHEATLEY, A.M., M.D. *Pharmacology* 

#### Associate Professors

GEORGE COOK AINSWORTH, D.D.S., D.M.D. Clinical Dentistry

#### Assistant Professors

RAYMOND HARMAN ASHLEY, M.A., M.S., Ph.D. Chemistry

GILMORE COLBY DICKEY, D.M.D. Crown and Bridge

CURTIS WILLIAM FARRINGTON, D.M.D. Clinical Dentistry

WALTER EMERSON FARRIS, D.D.S. Prosthetic Dentistry

WILLIAM MARTIN FLYNN, D.M.D. Clinical Dentistry

ARIAL WELLINGTON GEORGE

Roentgenology

HARRY AUGUSTUS GREENE, D.M.D. Clinical Dentistry

FRANK EUGENE HASKINS, Ph.G., M.D. Pharmacology

WILLIAM PRESTON HOUSTON, D.M.D.

Clinical Dentistry

OLGA CUSHING LEARY, M.D.

Pathology and Bacteriology

FRANCIS PATRICK McCARTHY, M.D. Pathology and Bacteriology

WALTER FREEMAN NOLEN, M.D. Anatomy

RICHARD HENRY NORTON, D.M.D.
Operative Dentistry

#### The Dental School

# REQUIREMENTS FOR ADMISSION TO THE THREE-YEAR COURSE LEADING TO THE DEGREE OF DOCTOR OF DENTAL MEDICINE

The Tufts College Dental School is a member of the National Association of Dental Faculties, the National Association, of Dental Examiners, and the American Institute of Dental Teachers.

The National Association of Dental Faculties voted that beginning with the session of 1917–18, its constituent schools should increase their courses from three to four years.

Admission to the first-year class may be obtained in one of two ways:

(1) By presenting a diploma and a transcript of record from an accredited high school or academy:

The transcript of record must show adequate preparation in certain subjects falling in two groups, known respectively as the Required and the Elective Group. In these groups the term "unit" represents a year's study in the specified subjects and is the equivalent of approximately a quarter of a full year's work.

				El	e	cti	ve	G	ro	uj	ο,	8	U	nit	S				Units
English																			3
Foreign	La	ang	gua	age	е	(el	en	nei	nta	ary	)			٠	٠				2
History									, •										1
Algebra	A	I				٠	٠		۰		٠	٠		ď	۰			۰	I
Plane G	eo	me	etr	y	٠											٠			ĭ

No subject offered in the Required Group can be counted in the Elective Group.

In addition to the eight units of the Required Group candidates for admission must also present subjects chosen from the following Elective Group equivalent to six and one-half units.

### Application for Admission

#### to the

### Tufts College Dental School

I hereby apply for enrollment in the Tufts College Dental School.

Name in full, including middle name.
Date
P.O. Address; City or Town
State
Street and No.
Date of Birth
Place of Birth
Name of Parent or Guardian
Address of Parent or Guardian
For certificate as to my moral character consult
(Name)
(Address)
Previous education: (State Name of each secondary school and Number of years attended.)
Total years Diploma was received: Date
I plan to register, in person, at the Dental School.
Date:
This application must be accompanied by a certificate of graduation and a full statement of the applicant's secondary school record. These

Answer the above questions fully, clearly, and accurately, and forward to FRANK E. HASKENS, Dean,

416 Huntington Ave., Boston, Mass.

documents must be signed by the school principal.



#### The Elective Group, 61 Units

Units	τ	Inits
Greek 2 or 3	Freehand Drawing	1*
Latin 2, 3, or 4	Shop Work ½ to	0 2*
French 2 or 3	Musical Appreciation	$\frac{1}{2}$
German 2 or 3	Music (Harmony)	$\frac{1}{2}$
Chemistry I	Algebra A2	I
Physics I	Advanced Algebra	$\frac{1}{2}$
Biology I	Solid Geometry	1/2
Botany I	Trigonometry	1 2
Zoology I	English History	1
Geology or Geography 1	Ancient History	. 1
Mechanical Drawing . 1*	American History and	1
	Civil Government	I

#### (2) By passing examinations:

Students who desire to satisfy the above requirements may take the examinations either in June or in September, or a part in June and a part in September.

The June examinations, arranged by the College Entrance Examination Board, will be given June 18 to 23, 1917, at Robinson Hall, Tufts College, Mass., and elsewhere, as announced by the Board. All applications for June examinations must be addressed to the Secretary of the College Entrance Examination Board, 431 West 117th Street New York, N. Y., and the student intending to take the Board examinations should make his plans known to the Secretary at an early date, if possible prior to May 1, in order to comply with all of the conditions imposed by the Board.

The September examinations are arranged by Tufts College and will be given September 13 to 15, 1917, at Ballou Hall, Tufts College, Mass. On the day of their first examination applicants for the September examinations are required to register at the office of the Registrar at Tufts College and pay an examination fee of \$5.00.

<sup>\*</sup>A total of not more than two units in three subjects.

The schedule for examination dates for September, 1917, is as follows:

- SEPT. 13. Elementary and Intermediate French, 9 to 11; Elementary and Intermediate German, 11 to 1; Elementary and Advanced Greek, Advanced Algebra and Trigonometry, 2 to 5.
- SEPT. 14. Algebra, 9 to 10.30; English, 10.30 to 12.30; Plane Geometry, 2 to 4; Physics, 4 to 5; Drawing, 4 to 6.
- SEPT. 15. Elementary, Intermediate, and Advanced Latin, 9 to 12, Solid Geometry, 9 to 11; Botany, Zoology, Biology, Geology and Economics, 11 to 1; History, 2 to 4; Chemistry, 4 to 5

The requirements are well-known to the principals of all secondary schools. A detailed statement of the requirements is given in the Appendix.

# ADMISSION TO ADVANCED STANDING AND REMOVAL OF CONDITIONS

Students who have taken courses in other accredited dental schools may be admitted to advanced classes upon presenting satsfactory evidence by credentials or by examination that they are qualified.

Examinations to establish this qualification are given at the Medical-Dental Building, on a schedule arranged by the Secretary, and begin on September 5, 1917.

Students from other colleges intending to take examinations for admission to advanced standing and those who desire to remove conditions are required to notify the Secretary on or before Tuesday, September 4, 1917.

Before taking these examinations each student must register by signing his name on the registration blank provided for the purpose. If a student fails to register in this manner, he will receive no credit for his examination.

#### OUTLINE OF THE THREE-YEAR COURSE

#### First Year

First Semester

Operative Technics Prosthetic Dentistry Physiology Oral Prophylaxis Histology Nine hours a week Nine hours a week Nine hours a week Two hours a week Eight hours a week

Five hours a week

Two hours a week

DENTAL SCHOOL	199
Second Semester	
Anatomy	Ten hours a week
Operative Technics	Nine hours a week
Prosthetic Dentistry	Nine hours a week
Oral Prophylaxis	Two hours a week
Second Year	
First Semester	
Clinical Dentistry (Forsyth Infirmary)	
Clinical Dentistry (Infirmary)	Six hours a week
Crown and Bridge (Lectures and Laboratory)	Nine hours a week
General Chemistry (Lectures and Laboratory)	Eight hours a week
Orthodontia (Lectures)	One hour a week
Pathology and Bacteriology (Lectures and Laboratory)	Five hours a week
Prosthetic Dentistry (Laboratory)	Six hours a week
Second Semester	
Clinical Dentistry (Forsyth Infirmary)	
Pharmacology (Lectures)	Eight hours a week
Orthodontia (Lectures)	One hour a week
Operative Dentistry (Lectures)	One hour a week
Clinical Dentistry (Infirmary)	Nine hours a week
Dental Chemistry (Lectures and Laboratory)	Three hours a week
Dental Histology (Lectures and Laboratory)	Three hours a week
Prosthetic Dentistry (Laboratory)	Three hours a week
Third Year	
First Semester	
Oral Surgery (Lectures)	One hour a week
Clinical Dentistry (Infirmary)	Six hours a week
Prosthetic Dentistry (Laboratory)	Six hours a week
Crown and Bridge Work (Lectures and Laboratory)	Six hours a week
Operative Dentistry (Lectures)	One hour a week
Hygiene (Lectures)	Two hours a week
Orthodontia (Lectures and clinic)	Five hours a week
Oral Prophylaxis (Lectures)	Two hours a week
Clinical Dentistry (Forsyth Infirmary) Equivalent	t to one hour a week
Second Semester	
Clinical Dentistry (Forsyth Infirmary) Equivalent	t to one hour a week
Oral Surgery (Lectures)	Two hours a week
Clinical Dentistry (Infirmary)	Six hours a week
Dental Jurisprudence	One hour a week
Prosthetic Dentistry (Laboratory)	Six hours a week
Crown and Bridge Work (Lectures and Laboratory)	Six hours a week
Operative Dentistry (Lectures)	One hour a week
Onth Jan 11 (T	231 7 7

Orthodontia (Lectures and clinics)

Oral Prophylaxis (Lectures)

# Description of Three-Year Course of Study

#### OPERATIVE TECHNICS \*

Dr. STROUT

Dr. E. M. Brown Dr. H. W. Brown Dr. HATCH

Instruction in this course will be by lectures, illustrated by models and drawings, and by practical work on the part of the student. The student's work will include the study of the forms of teeth, with carving in ivory; study of the position and form of pulp chambers and canals, with dissection of teeth; proper methods of treating and filling pulp canals, with operations on extracted teeth; porcelain inlay work, with practical examples; also proper methods of forming cavities for filling, and the manipulation of all filling materials.

#### PROSTHETIC DENTISTRY †

Dr. FARRIS

Dr. EWING	Dr. Reed
Dr. Gale	Dr. Ronan
Dr. E. J. Morse	Dr. Stevens
Dr. Peterson	Dr. Wolff

Particular attention is given to practical manipulation of vulcanite, celluloid, aluminum, and cast metal, for dentures; to gold-plate work, to preparation of plate for continuous gum and the application of continuous gum to crown and bridge work, as well as the construction of gold crowns and bridges. The natural form, color, and arrangement of the teeth, together with the entire range of procedure, from taking the impression to the completion of the case and its proper adjustment in the mouth, are thoroughly demonstrated.

<sup>\*</sup> NOTE.—The operations in the technical departments require a very large number of natural teeth, and a sufficient supply is sometimes difficult to get. It will therefore be to the interest of students if they will bring with them all the extracted teeth they can obtain.

<sup>†</sup> It has been the custom of the authorities of this School to furnish to the inmates of certain institutions for the aged, etc., artificial teeth and appliances at the cost of materials. Institutions desiring to avail themselves of this privilege should apply to the Department of Prosthetic Dentistry, Tufts College Dental School, Boston, Mass.

#### PHYSIOLOGY

Dr. RYAN

The course consists of lectures, laboratory work, demonstrations and quizzes. In the laboratory and demonstrations the student learns the methods with which the facts of physiology have been obtained as well as obtaining certain of these facts first hand. In the lectures the subject is treated systematically, the lectures being correlated with the laboratory work. Special emphasis is placed upon those aspects of human physiology having immediate practical interest from the standpoint of dentistry.

#### ORAL HYGIENE

This course includes a series of lectures and practical demonstrations in Oral Prophylaxis during the entire Freshman year. Abundant material for practical demonstrations is always obtainable for the clinical department.

#### HISTOLOGY

Dr. BATES

Dr. RUBIN

Dr. SPRAGUE

The subject of histology covers the first half of the first year. The work during the first half of the allotted time will be identical with that of the students in the Medical School. This part of the subject covers the study of the elementary tissues, beginning with their origin in the embryo.

**Dental Histology.** Dental Histology will be taught during the second year. In this connection particular attention will be given to the study of the minute anatomy of the tooth. The development of the teeth will also receive careful treatment.

The department is equipped with microscopes which, on the payment of a small fee, will be at the service of such as cannot furnish instruments of their own.

#### ANATOMY

Dr. SULLIVAN

Dr. NOLEN

Dr. HEPBURN

The course in anatomy is given during the second half of the first year. It consists of lectures recitations and of special demonstrations on the cadaver. In addition, during the first four weeks of the course six hours a week are devoted to section work in Osteology.

#### CLINICAL DENTISTRY

#### Dr. Johnson

Dr. Ainsworth	Dr. FARRINGTON	Dr. GREENE
Dr. Houston	. Dr. Ri	CE
Dr. Baker	Dr. HENDERSON	Dr. Petzoldt
Dr. Briggs	Dr. LaFayette	Dr. PEIRCE
Dr. Charren	Dr. MAGUIRE	Dr. PIPER
Dr. Church	Dr. Manning	Dr. Risegari-Gai
Dr. C. H. DAVIS	Dr. McKinnon	Dr. Ryder
Dr. FLYNN	Dr. METTERS	Dr. Scofield
Dr. GETCHEL	Dr. E. J. Morse	Dr. Shay
Dr. Gethro	Dr. Nalchajian	Dr. TANNEBRING
Dr. GOULET	Dr. Norton	Dr. WIDDOWSON
Dr. F. E. GRANT	Dr. Parks	Dr. WILLEY
Dr. W. H. GRANT		

The method of instruction in clinical dentistry is by clinical lectures to the students of each class, accompanied by practical demonstration of various operations on the teeth and neighboring tissues.

Ample opportunity for work in practical operative dentistry is furnished in this department, and the student by actual practice receives training in the various dental operations, and in the diagnosis and treatment of diseased conditions of the mouth and teeth.

For many years it has been the custom of the authorities of this School to furnish to certain charitable and penal institutions qualified dentists for the purpose of alleviating cases of actual suffering. Applications for an extension of this service should be made to the head of the Department of Clinical Dentistry, Tufts College Dental School, Boston, Mass.

#### CROWN AND BRIDGE

Dr. KELTIE

Dr. Cogan Dr. Goodspeed Dr. Dickey Dr. Parsons

This department is situated on the third floor of the building in a large room equipped with twenty-one chairs, casting machines, electric motors, electric furnaces for porcelain, compressed air and a general work bench, fitted for stoves, blow pipes and bunsen burners. The junior laboratory is equipped to accommodate two hundred and fifty students where the Juniors make their specimen cases under a corps of instructors.

In this course the student is prepared by a series of lectures covering all branches of Crown and Bridge work, and is then taken directly into the laboratory where he is obliged to make suitable specimens on an anatomically articulated model.

The specimen work is all done during the Junior year, and prepares the student for the practical work of the Senior year.

In the Senior year the student is afforded ample opportunity for practical work from diagnosis to the completion of cases of all kinds.

#### GENERAL CHEMISTRY

Dr. ASHLEY

Mr. Bradley Mr. Chakmakjian Mr. O'Meara

The course in General Chemistry consists of descriptive chemistry and qualitative analysis, with so much of theoretical chemistry as is necessary for a proper understanding of the subject.

The classification of the carbon compounds is also taken up at considerable length, and special reference is made to those which are of interest in the study of dentistry. The instruction is by lectures, recitations, and practical work by the students in the laboratory in the first semester of the second year.

Dental Chemistry. During the third year this preliminary training in chemistry is followed by lectures, recitations, and laboratory work in dental chemistry. The metals, with their alloys and salts as used in dentistry, the bones and the teeth, the saliva, and the chemistry of the mouth are studied.

#### ORTHODONTIA

Dr. Delabarre

Dr. Allen : Dr. Lynch
Dr. Duddy Dr. Pierce
Dr. A. L. Morse

The Junior year is devoted to the theory of normal and malocclusion, history, diagnosis, etiology, technique and uses of appliances, continuing in the Senior year with the practical application of the principles of orthodontic procedure to the different classes of malocclusion and to actual cases. Each student is required to conduct at least one case, doing all of the work under instruction and supervision.

#### PATHOLOGY AND BACTERIOLOGY

Dr. TIMOTHY LEARY

Dr. OLGA LEARY

Dr. DUNBAR

Dr. GUTHRIE

Dr. McCarthy

Dr. Dwyer

Dr. Watson

Miss Fritz

Miss Pews

The subjects of pathology and bacteriology are considered together. This method permits showing the relation of bacteria to the disease processes which they produce. The work will consist of lectures, required laboratory work, and demonstrations. The student is made acquainted with the bacteria of the mouth, and is required to cultivate and study the important organisms. He is expected to carry out experiments to demonstrate the production of artificial caries. The subject of general pathology is thoroughly covered. The special pathology of the mouth, and of the respiratory and intestinal tracts, is given particular attention. Inflammations, especially the infectious types, among which are the lesions produced by the pyogenic bacteria, are carefully considered. The process of repair in soft tissue and bone, and tumors of the mouth and face, are studied from sections of lesions.

#### PHARMACOLOGY

DR. F. G. WHEATLEY

Dr. HASKINS

Dr. FUNNELL

Dr. McCrudden

Instruction in pharmacology consists of lectures, recitations, and laboratory exercises. Special attention is given to the physiological action of drugs, and to the relation always existing between therapeutics, physiology and pathology. The laboratory course is designed to familiarize the student with all medicinal preparations and processes.

Prescription writing receives careful attention and recent additions to *materia medica*, deemed of interest to the dentist, are duly considered.

#### OPERATIVE DENTISTRY

Dr. RICE

In operative dentistry the instruction is both didactic and clinical. Lectures are given covering the whole field, and familiarizing the student with methods, the conditions under which different filling materials are used, and the most approved manipulation of the same. Many lectures are followed by clinics at which attendance is obligatory. Emphasis is placed upon the preparation of cavities for filling. Instruction is further given concerning the pathological conditions of the mouth and the treatment of the same, exposed pulps, inflamed pulps, dead pulps, abscesses, inflammation of the peridental membrane, and allied subjects. Attention is given to the preparation of cavities for porcelain filling.

#### ORAL SURGERY

Dr. CHENERY

The course in oral surgery consists of a series of lectures. These lectures explain the fundamental facts which should be understood by all students who propose to treat any part of the human body.

Asepsis and anesthesia are discussed, and practically demonstrated in the infirmary. The student is instructed in the administration of ether and of nitrous-oxide gas. In addition to the daily instruction, one morning in each week is devoted wholly to this work, the class being divided into sections. At this weekly demonstration, cases are presented exemplifying the choice of anesthetics. The danger signals of anesthesia are considered, and the proper treatment explained. Local anesthesia receives careful attention, and its limitations are pointed out.

The technique of aseptic and antiseptic methods in dental work is thoroughly explained.

#### ANESTHESIA AND EXTRACTION

Dr. STROUT

Dr. CANAVAN

The extracting room is supplied with all needful instruments and appliances for extracting teeth and for the performance of the simpler operations in surgery. Ample waiting rooms are adjacent, and also rooms for the care of patients after anesthesia. Administrations of nitrous-oxide gas and ether are made on regular days. The room is at all times under the personal supervision of the instructor in Anesthesia.

# General Information

#### TERM EXAMINATIONS

Regular examinations for promtoion and for graduation are held at the end of each course.

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At the end of each session a certificate of his standing for the year is sent by mail to each student. No marks will be sent or credit given to any student who is in arrears with the Bursar.

#### PROMOTION

Students who have passed the requirements for admission and the examinations of the first-year class are, on recommendation of the Faculty, promoted to the second-year class. Similarly, students who have no first-year conditions and have passed their second-year examinations are admitted to the third-year class.

#### STATE BOARD EXAMINATIONS

Students shall not take State Board Examinations in Dentistry previous to the time of final examinations of the third year, without written permission from the Secretary of the Dental School.

#### GRADUATION

Before the degree of Doctor of Dental Medicine can be conferred, the candidates must fulfil the following requirements:

- 1. They must have paid all Dental School charges including the cost of diploma.
- 2. They must present a certificate that they are twenty-one years of age and of good moral character.
- 3. They must have passed all the required examinations, and have performed the required amount of laboratory and clinical work.

- 4. They must have satisfied the professors of clinical and prosthetic dentistry of their ability to meet satisfactorily the requirements of the profession.
- 5. They must have attended some accredited dental school for three college years, the last of which must have been at this School.

#### HONORS

Students who have attended this School for three years, and have obtained an average of ninety per cent. in their first examinations, shall be eligible to "summa cum laude," and those who have obtained an average of eighty per cent. shall be eligible to "cum laude."

Students who have failed in any examination are not eligible for honors.

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# DEGREES AND HONORS

1915-1916

# Sixtieth Annual Commencement

June 21, 1916

#### DEGREES CONFERRED IN COURSE

#### Bachelor of Letters

John Whittemore Farwell (extra ordinem as of the Class of 1866)

#### Bachelor of Arts

Carl Oscar Anderson John Bancroft Bisbee Benedict Fenwick Boland Francis Ioel Foster Herbert Moulton French George Lester Fuller William Gaskin Benjamin Ira Golden

Edward Watson Gore Earl Smith Hewitt John Nicol Mark (magna cum laude) Thomas Montgomery Mark (magna

cum laude)

Donald Ross McJannet Richard Patterson Albert Walter Swenson (summa cum laude)

#### Bachelor of Science

Herbert Eustace Armstrong (cum laude) James Lawrence Brown, Jr. (extra ordinem as of the Class of 1915) Philip Barker Crosby Julian Richard Cross Gerald Leo Doherty Kenneth Rogers Hill Egbert William Ashford Jenkinson Aubrey Irving Nellis

William Harrison Proctor Harold Francis Roche (summa cum laude) Frederick Lynne Ryan Dirrell Daniel Sample Richard Ilsley Smith Courtney Nash Starkweather Sidney Cushing Wiggin Earl Snow Wilson

#### Bachelor of Science in Chemistry

Windom Alpheus Allen (extra ordinem as of the Class of 1915) Arthur Vincent Donnellan Frederick Potter Flagg Samuel Loomis Arthur Winchester Morrison (extra ordinem as of the Class of 1915) Leo Thomas Murphy

Alexander Clifford Nixon, Jr. Israel Jacob Pollack

Everett Lenox Reed

Frank Simon Shapiro John Blackmer Smith Clayton Cree Spencer (magna cum laude)

Henry Alexander Stafford Carl Weston Staples Max Tennis (cum laude)

Cecil Benton Town (summa cum laude)

Lester Newton Towne

#### Bachelor of Science in Civil Engineering

David Ferguson

Henry Edward Halpin (summa cum

laude)
Robert Leston McLellan (cum laude)

John Arthur Neale (extra ordinem

as of the Class of 1915)

Conrad Pennucci

Kinsley Barrett Thorndike

#### Bachelor of Science in Structural Engineering

John Irving Copp (summa cum laude) Everett Currie Hunt

William Arthur Keyes (cum laude)

#### Bachelor of Science in Electrical Engineering

Edward Franklin Hall

Harold Sylvester Hamilton

Richard Bruce Webb (cum laude)

#### Bachelor of Science in Mechanical Engineering

Roy Cuming Brett

Thomas Christopher Coleman, Jr.

(summa cum laude)
Frederick Joseph Ellis

Edwin Chandler Esten (cum laude)

John William Fairbank (magna cum laude)

Tanae)

Ellis Leslie Eames Garde Raymond Clyde Taylor (cum laude)

# Bachelor of Science in Chemical Engineering

John Harold Boss

George Alonzo Dalton

Nelson William Dempsey Charles Franklin Jameson (extra

ordinem as of the Class of 1915)

Charles George Kramer Cedric Crandon Lee

William Joseph Mishel Clinton Russell Powers

## Bachelor of Sacred Theology

Thomas Montgomery Mark

Master of Arts

Margaret Hutton Abels

#### Master of Science

Carl Arshag Garabedian Ralph Oliver Philips

#### Honors

Thomas Christopher Coleman, Jr., (Mechanical Engineering)

John Irving Copp (Structural Engineering)

John William Fairbank (Mechanical Enginering)

Henry Edward Halpin (Civil Engineering)

John Nicol Mark (English)

Thomas Montgomery Mark (English) Harold Francis Roche (History and

Public Law)

Clayton Cree Spencer (Chemistry)

Albert Walter Swenson (French)
Cecil Benton Town (Chemistry)

#### Honorable Mention

Herbert Eustace Armstrong (Political Science)

Thomas Christopher Coleman, Jr. (Electrical Engineering)

John Irving Copp (Civil Engineering) Albert Walter Swenson (English) Edwin Chandler Esten (Mechanical

Engineering)

Henry Edward Halpin (Structural Engineering)

William Arthur Keyes (Structural Engineering)

Robert Leston McClellan (Civil Engineering)

Harold Francis Roche (Political Science)

Raymond Clyde Taylor (Mechanical

Engineering)

Max Tennis (Biology) Cecil Benton Town (Biology)

Richard Bruce Webb (Electrical Engineering)

#### Doctor of Medicine

Samuel Edson Abbott

Arthur Forest Anderson (cum laude)

Jacob Applebaum (cum laude)

Charles Aronson (cum laude) Thomas Matthew Barry (extra ordi-

nem as of the Class of 1915)

Jesse Wolfenden Battershall (cum laude)

Alfred William Berr (cum laude)

Catherine Elizabeth Brannick (cum lande)

Harold Edward Carney

John Henry Cauley (cum laude)

Samuel Edward Chalfen (cum laude)

Leo Cohen (cum laude)

Samuel Adams Cohen

Hilary Joseph Connor

William Frederick Cotting (cum laude) William Richard Martin

Stephen James Dalton

Vincent James DiMento (cum laude) Eliza Armenoohi Melkonian

John Duff, Jr.

Joseph Henry Dunn (cum laude) Nicholas DuVally (cum laude)

Edna Frances Easter

Herbert Reynold Fiege (cum laude)

Myer Aaron Fleeter (extra ordinem as of the Class of 1915)

Arthur Leonard Gaetani (cum laude) Arthur Joseph Ganley, B.S.

Victor Patrick Genge

Winifred Margaret Grant (cum laude)

Harold Russell Green (extra ordinem as of the Class of 1915)

Frank Smith Hale (cum laude)

Wilbert Clark Hardy

Frank Edwin Harriman

David Joseph Herlihy

William Cyril Row Hurley (cum laude)

John Greenwood Jennings (extra ordinem as of the Class of 1915)

Anna Hilda Kandib (cum laude)

Simon Bartholomew Kelleher (extra ordinem as of the Class of 1915)

Edward Joseph LaLiberte

Charles Leo Lynch

Lillian Lee MacPhee

Charles Elmer Magoun (extra ordinem as of the Class of 1915)

Robert Lewis McKiernan

Florence Lyndon Meredith (cum

laude)

William Henry O'Connor

George William Papen (cum laude) Walter Leslie Perry

Harris Earle Powers

Thomas Christopher Quirk (extra ordinem as of the Class of 1915)

Moses Bernhard Radding

George Arnold Rice (cum laude)

Israel Ellis Rudman

David Miller Scott, A.B. Hugh Ludwig Simmons

Joseph Jacob Skirball (cum laude)

Bernard Spillane, A.B.

Daniel Joseph Sullivan, A.B. (cum laude)

Robert Thomas Sullivan

Ester Mathilda Eleonora Sundelöf (cum laude)

Edward James Tierney (cum laude)

Henry Pratt Tobey Louis Joseph Ullian Kathalyn Voorhis

Esther Marguerite Park Ward

Bernard Weiss

Leroy Danforth Whitney (extra ordinem as of the Class of 1915)

William Baxter Wood

Wong King Yat

Angelo Mario Zarrella

#### Doctor of Dental Medicine

Hyman Joseph Adelstein Ernest William Auger

Fay Torence Bowen

William Foster Brown Harold Freeman Burrell

Richard Philemon Caisse

Arthur Martin Carignan

Ralph Arthur Carroll

Harry Charren Garnet Coburn

Joseph Harold Cohen (extra ordinem as of the Class of 1915)

Samuel Jacob Court

Henry James Cronin

Ralph Edward Cunningham Hilma Adella Davis

Edmond Leonide Desautels

Joseph James Donahue

Paul Aloysius Donohue Philip Dorenbaum

Louis Philip Doucet

Philip Arthur Duffy Andrew George Farquhar

Joseph Augusto Fialho

Nathan Hyman Finkelstein

Harry Freundlich

Robert Emmet Getchel

Cranston Franklin Godfrey, Jr. (extra ordinem as of the Class of 1915)

Frank Luther Goodspeed (cum laude)

Francis Joseph Greeley

Harvey LeRoy Haskell

Charles Elliot Hatch

Myles Thomas Hogan (extra ordinem

as of the Class of 1915) Nathan Israel Jaffee

Alexander Patterson Johnstone

Stanley Clifford Keene

Walter Donovan Kells

Clifford Earland Kelly Alexander Leslie Keltie

Theodore Edward LaFayette, Jr. (cum laude)

Jules Arthur LeBlanc, B.A.

Louis Lesser

Angelo Luciano

Richard Alphonsus Lynch

William John Mackey, Jr.

John Joseph Mahoney

Newell Cephas Mayo

Thomas Charles McDonnell (extra ordinem as of the Class of 1915)

Martin Henry McGrath (extra ordinem as of the Class of 1915)

Matthew Aloysius Meagher

Philip Edward Meltzer (extra ordinem as of the Class of 1915)

Frank Walsh Moultis

Thomas Bernard O'Leary

Arcade Joseph Ouimet, B.S.

James William Marsden Parks, Jr.

Willis Burleigh Parsons (cum laude) Abijah Davenport Pierce (cum laude)

Mossman Gardner Reed

William Edward Reed Edwin James Roche John Miller Schofield John Emery Sewell George Roy Smith Roy Weir Smith Maurice Spack Everett Eaton Spears Walter Martin Stankard Marion Cecelia Stevens Joseph Alfred Streker

Chester Henry Tannebring John Donoclift Thomas Walter Jacob Volk John Aloysius Wade William Dodge Walker, A.B. Edward Herman Westphal Walter Elton Whittaker Frank Xavier Widdowson, A.B. Clarence Wight (extra ordinem as of the Class of 1915) Bruce McClellan Wolff

# Jackson College for Women

#### Bachelor of Arts

Ruth Burbank (cum laude) Lucille Horton Chipman Alice May Cotton (summa cum laude) Isabel Harrington Margaret Cragin (summa cum laude) Dorothy Hart (magna cum laude) Dorothy Bascom Cutler (magna cum Avis Jeanette Keir laude) Pauline Duffey Mary Violetta Gardner (magna cum laude) Aileen Alberta Hagerty

Marion Hall Beulah Myrtle Hamilton (cum laude) Mabel Knowles Matheson Christine Blanche Noves (summa cum laude) Lydia Josephine Piper

#### Bachelor of Science

Madeline Jeffers Mildred Anna Dacey

Emilie Poor Osborn Bernice Ethel Wood (cum laude)

# Bachelor of Science in Chemistry

Madeleine Bixby (summa cum laude)

#### Associate in Arts

Daisy Mae Bartlett

#### Honors

Madeleine Bixby (Chemistry) Alice Mae Cotton (English and French) Margaret Cragin (Greek)

Dorothy Bascom Cutler (English) Mary Violetta Gardner (English) Dorothy Hart (English) Christine Blanche Noyes (English and Latin)

#### Honorable Mention

Madeleine Bixby (Philosophy) Ruth Burbank (Biology) Margaret Cragin (Latin) Beulah Myrtle Hamilton (History and Public Law Bernice Ethel Wood(Political Science)

#### Commencement Parts

Donald Ross McJannet, Cand. A.B.: "The Myth of Mental Discipline."

George William Papen, Cand. M.D.: "One Phrase of Tuberculosis Treatment."

Alice Mae Cotton, Cand. A.B.: "The Stuff as Dreams are Made On."

Thomas Christopher Coleman, Jr., Cand. B.S.: "Safety Engineering."

James William Marsden Parks, Jr., Cand. D.M.D.: "The Place of Dentistry in Modern Preventive Practice."

Thomas Montgomery Mark, Cand. S.T.B.: "The Spirit of Christ and the Present Crisis."

# Diplomas Given Subsequent to June, 1916

#### Doctor of Medicine

(Extra ordinem as of the Class of 1916)

Paul Carroll Dennett Alfred Edward Gallant Goodwin Adolph Johnson Angelo Liberti Earl Cunningham MacCordy Alexander Mileau, Jr. Rudolph Jonas Shafer John Gerard, Sweeney

#### Doctor of Dental Medicine

(Extra ordinem as of the Class of 1916)

Sidney Herman Beerman
Charles William Coggin
Harold William Crowell
Obadiah Armstrong Demarest
Alexander Goldbarg

John Henry McKenna James Emmett Nastasia Edmund Andrew Pierce Benjamin Rommel

Samuel Krasnoo

William Francis Welch

# Awards of Prizes 1915-1916

Scholarship of the Class of 1898 Helen Almira Rowe

Greenwood Prize Scholarship in Oratory
Jesse Moses Aronson

Goddard Prize in Biology Clarence Dunbar Hart

Moses True Brown Scholarship
Leonard Alexander Rice

Alpha Omicron Pi Scholarship Geneva Alice Wheet

Alpha Xi Delta Scholarship Esther Parshley

Chi Omega Scholarship Helen Beatrice Crocker

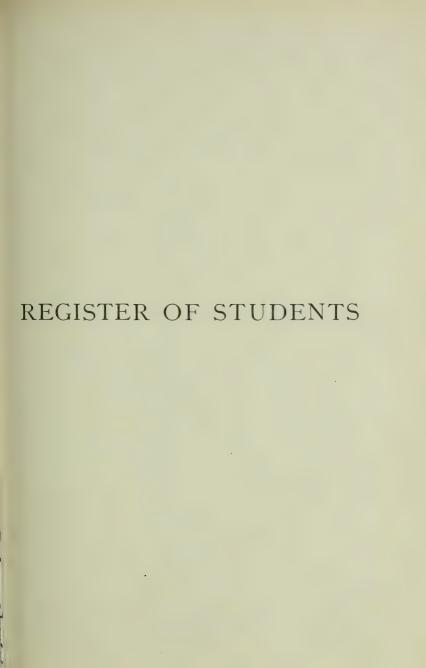
Sigma Kappa Scholarship Nellie Birkenhead Mansfield

Rhetorical Prizes

First Prize
Albert Walter Swenson

Second Prize
Earl Smith Hewitt

Third Prize
Jesse Moses Aronson



# Students Enrolled in Tufts College

[In the following list the course pursued by each student is indicated by the Italic letters immediately following the name. The signs used are as follows: courses leading to the degree of A.B., ab; to the degree of B.S., bs—in Civil Engineering, ee; in Structural Engineering, ste; in Electrical Engineering, ee; in Mechanical Engineering, me; in Chemical Engineering, che. For the first two years in the Engineering School no differentiation is made.

The third column records the home address, which is in Massachusetts unless stated to be elsewhere. The fourth column gives the address at Tufts College, unless the street is printed in Italics, in which case it is a part of the home address.]

# School of Liberal Arts Senior Class

#### Borden, Karl Bigelow Collinsville, Conn. Φ Δ House Bratt, Albert Verner ΔT Δ House Everett Carro, Leon Julius ab Revere Dean, o Claff, Elmer Louis bs Everett 160 Chestnut St. Collins, Harold Edward bs Haverhill West, 2 Curtin, Francis Gregory bs Medford 93 Governor's Ave. Davies, Roland Crocker ab Tufts College 72 Professors Row Hart, Clarence Dunbar W. Somerville 35 Charnwood Rd. bs Hurley, Harold Francis bs Malden 88 Hubbard St. Jones, Herman Wentworth W. Somerville 20 Winslow Ave. ZΨ House Merrow, Oscar Earl Ossipee, N. H. Mohor, Albert John Newton Center East, 25 Penaligan, James Henry Winchester ZΨ House Poole, Joseph Ellsworth bs Dover Φ Δ House Scamman, William Merrill Φ Δ House hs Lexington Sefton, Archibald Kyle bs Medford Hillside 93 Capen St. ФЕП House Spunt, William 65 Winthrop Stanton, Charles Ingram bs Revere ΔΥ House

# Whippen, Elbert Wilder ab-bd Kingston, N. H. Paige, 13 Junior Class Avers, Charles Frank bs Everett $\Sigma$ TA House

bs

bs

W. Somerville

Tremont, Me.

bs Beverly

Δ Υ House A T Ω House

θ Δ X House

Sweet, Walter Prescott

Symmes, Leland Parker

Watson, Barron Crowell

Ayers, Charles Frank	bs	Everett \( \Sigma \)	TA House
Ball, Leon Eugene	bs	So. Berwick, Me.	Dean, 3
Barbara, Charles Albert	bs	Port Chester, N. Y.	Paige, 20
Bartlett, Howard Searles	ab	Brookline	West, 5
Burns, Edward Gregory	ab	Taunton	West, 9
Cameron, Daniel Clarence	bs	Arlington L	ΔT Δ House

Coddington, Philip Littlefield	bs	Berlin, N. H.	Dean, 11	
Coffey, Daniel Lorden	ab	Medford	38 Touro Ave.	
Colcord, Elmer Danforth	bs-bd	Pittsfield, Me.	Paige, 7	
Coussoule, Loukas Nicholas	ab	Sparta, Greece		
		298 Bosto	on Ave., Medford	
Cronin, George Robert	bs	South Boston	Φ Δ House	
Ellis, William	bs	Roxbury	8 Cunard St.	
Geddes, James Gardner	bs	Somerville	88 Munroe St.	
Geer, James Clifford	bs	Three Rivers	A T Ω House	
Given, Minott Denham	bs	Melrose	147 First St.	
Goldberg, Bernard Isadore	' bs	Roxbury	West, 26	
Gordon, Israel	bs	Boston	West, 15	
Green, Bertram Emanuel	bs	Malden	390 Salem St.	
Jochim, Henry Frank	bs	Revere	West, 9	
Lalor, Daniel Edward Coffey	bs	Watervliet, N.Y.	East, 18	
Lamont, Arthur Lindley	ab	W. Somerville	13 Conwell Ave.	
Lane, Franklin Johnson	bs	Winchester	Dean, 10	
Marsh, Carl Alphonso	ab	Brattleboro, Vt.	ΔΥ House	
Mendum, Willis Clark	ab	Woburn	16 Arlington Rd.	
Messer, Theodore Powers	bs	Somerville	West, 12	
Miller, Herbert Dwight	bs-bd	Tufts College	Paige, 3	
Morison, Trueman Greene	bs	W. Somerville	Δ Υ House	
O'Keefe, David Charles	bs	Revere	West, 23	
Paul, Frederick Henry, Jr.	bs	Waltham	West, 22	
Peck, Howard Bennett	bs	Bridgewater, Conn	. ΔΥ House	
Porter, Russell Woods	ab	Springfield	ATΩ House	
Reed, Alfred Smith	bs	Roslindale	Dean, 14	
Rice, Leonard Alexander	ab	Somerville	Dean, 9	
Rood, George Wilson	ab	W. Somerville	63 Curtis St.	
Warren, Lowell Alfred	bs	Waltham	30 Prospect St.	
Weisberg, Max	bs	Boston	42 Staniford St.	
Williams, Harold Jenkin	bs	Quincy	107 Common St.	
Sanhamara Class				

# Sophomore Class

Baird, Arthur Earl	bs	South Boston	Paige, 25
Barrows, Wendell Parsons	bs	Waltham	101 Alder St.
Beacham, Earl Shepard	bs	Poughkeepsie, N. Y	A T $\Omega$ House
Beattie, Ralph	ab	North Andover	West, 32
Beyer, Samuel Harry	bs	Roxbury	West, 31
Campbell, Alan Bailey	ab	Dorchester	ΔΥ House
Crocker, Willard Frederick	bs	Quincy	West, 5
Crockett, David	ab	Arlington Heights	15 Wachusetl Ave.
Cronin, George Francis	bs	Maiden	ΣTA House

Cutter, Edward Russell	ab	Arlington	167 Summer St.
Cutting, Ralph Curtis	bs	Cambridge	375 Broadway
Davis, Philip Sidney	bs	Somerville	Dean, I
Eveleth, George Simmonds, Jr.	bs	Little Falls, N.Y.	
Farley, Albert Leo	bs	Boston	76 Alleghany St.
Fernald, James Merrill	ab	Fitchburg	Whalom Park
Finn, Julius Gerstein	bs	Roxbury	41 Georgia St
French, Winslow Hall	bs	Waltham	, , ,
Garabedian, Harold Arsen	bs	Dorchester Center	West, 2
Gould, Douglas Warren	bs	Malden	East, 27 $\Phi \Delta$ House
, 0	bs	Boston	
Gruber, Barnet	bs	Boston	77 Phillips St. 20 Garden St.
Guberman, Philip			
Henrich, Karl Raymond	ab	Orange	West, 17
Howard, George Arthur	bs	Balboa, Canal Zor	ord St., Somerville
Jeffery, Madison Peters	ab		Arlington Terrace
Johnson, Winthrop Mann	bs	Natick	5 Concord St.
Leach, Edgar Percy	bs	Methuen	East, 26
Lebowich, Richard Jacob	bs	Dorchester	West, 26
Lowenstan, Sigmund	bs	Somerville	31 Thurston St.
MacLeod, Earle Harvey	bs	Cliftondale	West, 10
Marcus, Saul Maurice	bs	Lynn	73 Rockaway St.
McKenna, Hugh Steele	bs	Thompsonville, Co	, ,
McKenzie, William Forbes	bs	Thorndike	ATΩ House
McNamee, Albert Percy	bs	Belmont	East, 16
Nathanson, Robert Bernard	bs	Boston	8 Parkman St.
Quint, Samuel Theodore	bs	Malden	ΦΕΠ House
Rogers, Harold Arthur	bs	W. Somerville	39 Paulina St.
Ropes, Lawrence Goodhue	ab	Salem	ZΨ House
Schenk, Harold Louis	ab	Wheeling, W. Va.	West, 28
Segel, Abram	bs	Melrose	ФЕП House
Stroehmann, Carl Frederick	bs	Wheeling, W. Va.	West, 28
Whitcomb, Lyman Wells	ab	Barre, Vermont	West, 16
Williams, Allton Thomas	ab	Revere	381 Broadway
Williams, Richard Joseph	bs	Lynn	East, 27
Wood, Ralph Peirce	bs	Everett	Φ Δ House
Young, Raymond Morrison	bs		θ Δ X House
Fres	hmar	Class	

#### Freshman Class

Adamson, George Dent	bs	Manassas, Va. 7 Alfred	dSt., Medford
Anderson, Paul Joseph Adolph	bs	So. Manchester, Conn.	East, 29
Ballou, John Lyman	bs	Medford 76	Winthrop St.
Beaton, James Stanley	bs	Manchester	22 Bridge St.

Bedell, Howard Everett	ab	Wilmington	Burlington Ave.
Berquest, Chester Edward	bs	Arlington 259	Massachusetts Ave.
Bouvé, Howard Allston	bs	Wakefield	A T Ω House
Brackett, William Ernest	ab	West Medford	152 Mystic St.
Brewer, John Warren	bs	Hingham	Φ Δ House
Brookings, Roydon Fall	bs	West Medford	West, 2
Brown, William Thomas	bs	Bondsville	East, 18
Cahill, Horace Tracy	bs	Roxbury	23 Dana St.
Cahoon, Sumner Roger	bs	Medford .	61 Winthrop St.
Castelbaum, Lewis	bs	Highlands, N. J.	15 Seneca St.
Chapin, Bernard Lorenzo	bs	Somerville	II Mystic St.
Chapman, Samuel	bs	Marblehead	ZΨ House
Claff, Philip Frederic	bs	Malden	ФЕП House
Cohen, Arthur Gilbert	ab	Somerville	West, 20
Cohen, Edward Israel	ab	Roxbury	ΦEΠ House
Collins, George William	bs	Medford	Φ Δ House
Cooke, Arthur Burrell	bs	Waltham	ΔΥ House
Cosgrove, Charles David	bs	Medford	87 Otis St.
Cox, Henry Eugene	ab	East Wakefield,	N. H. West, 10
Davison, John Purley	ab	North Billerica	Paige, 26
Dodge, Gordon Chamberlain	bs	Holden	Dean, 12
Eaton, Joseph Ashley	bs	Rutland, Vt.	East, 22
Eaton, Roland Leonard	ab	Sebasco, Me.	ZΨ House
Frankel, William Israel	bs	Roxbury	89 Ruthven St.
Friis, Jan Trap	bs	Medford	ZΨ House
Gifford, Winfred Bradford	bs	Dorchester	18 Plain St.
Givner, Joseph	bs	Mattapan	51 Wildwood St.
Goduti, Emil	bs	Somerville	167 Albion St.
Goldfine, Albert	bs	Boston	ΦΕΠ House
Hale, Otis Cowell	bs	Somerville	42 Bradley St.
Hall Clifford Roberts	bs	Charlestown	54 High St.
Hall, Webster	bs	Somerville	23 Monroe St.
Hammond, Leigh Hunt	bs	West Newton	ATΩ House
Hammond, Oswald Kenric	ab	Auburn, Me.	East, 33
Harper, Frederick Lawrence	bs	Chelsea	59 Bellingham St.
Haskell, Herman Jonas	bs	Dorchester	34 Greenwood St.
Henderson, Warren James	bs	Arlington	350 Appleton St.
Hubon, Charles Wilson	ab-bd	Salem	Paige, 16
saac, Edward John	bs	Brighton	32 Richardson St.
ohnson, Arthur Harmon	ab	Holden	Dean, 12
oy, Edward Albert	ab	Watertown	54 Spruce St.
Keefe, David Edwin	bs	Richmond, Vt.	West, 3
Ceefe, Owen Francis	bs	Watertown	East, 23
			, 3

Kelley, Philip John	bs	Cambridge	15 Walker St.
Kellock, James Bryden, Jr.	bs	Somerville	22 Dover St.
Kenny, Walter Douglas	bs	Pittsfield	Paige, 14
Lamont, Ralph Wilkinson	ab	Somerville	West, 20
Lewis, Philip Bullard	bs	Tufts College	20 Professors Row
Linsert, Wilfred	bs	Belmont	124 Goden St.
Lipkin, George	bs	Everett	817 Broadway
MacKenzie, Donald Emerson	· bs	Waverley	208 White St.
Mahany, Walter Thomson	bs	West Medford	23 Boston Ave.
Malone, James Francis	ab	Dorchester	West, 7
Maslen, William MacMillan	bs	Hartford, Conn.	West, 30
May, William Henry	bs	Cambridge	336 Harvard St.
McClench, Donald	bs	Springfield	Dean, 11
Miles, George Stanley	bs	W. Somerville	249 Elm St.
Mullen, Charles King	bs	Wollaston	190 Everett St.
Nash, Louis Edward	bs	Allston	9 Mansfield St.
Newton, Carl Elbridge	bs	Somerville	8 Westwood Rd.
Nickerson, Donald Edgar	ab	W. Somerville	31 Conwell Ave.
O'Donnell, John Parsons	ab	Melrose	54 Bellevue Ave.
Olson, Arvid Leonard	bs	Somerville	28 Gibbens St.
Olson, Wallace Bruce	ab	Somerville	741 Broadway
Patrician, Edward Vent, Jr.	bs	W. Somerville	12 Grove St.
Peirce, Laurence L. Jr.,	bs	Arlington Heigh	hts 52 Robbins Rd.
Pieper, Charles Albert	bs	Gretna, Manitol	
•		440 N	lewbury St., Boston
Pierce, Chester Blanchard	bs	Roslindale	33 Ashfield St.
Poole, Arthur Edward	bs	Dover	Φ Δ House
Prescott, Daniel Alfred	bs	Medford	7 Alfred St.
Pryor, Paul Lawrence	115	Revere	Σ T A House
Quian, David Harold	bs	Boston	568 Newbury St.
Reagan, Neil Francis	bs	St. Albans, Vt.	East, 31
Roman, John Baptiste	bs	Charlestown	42 Winthrop St.
Ruddy, Hiram Richard	bs	Watervliet, N. Y	East, 26
Ruggeri, Samuel	bs	So. Boston	West, 23
Rutter, John Elliot	bs	Waltham	East, 29
Scheinfein, Samuel Solomon	bs	Malden	121 Tremont St.
Scott. Carroll Edward	ab	Farmington, N.	$H$ . $\Delta \Upsilon$ House
Shepaid, Sumner Ware	ab	Everett	16 Winthrop St.
Sherin, Marcus Leon	bs	Swampscott	55 Puritan Rd.
Solomon, Samuel Alexander	bs	Dorchester	6 Lorne St.
Stilphen, Mortimer Bullard	ab	Swanton, Vt.	East, 6
Stone, Donald Pitman	bs	Marblehead	West, 29
Sweeney, Frederick Lawrence	ab	E. Boston	35 Bennington St.

Symmes, Marshall Wyman	bs	Winchester	251 Main St.
Taggart, Curtis Learoyd	Бs	Wakefield	East, 23
Teele, Kenneth Robert	bs	San Juan, P. R	$\Delta T \Delta House$
Thiesfeldt, Arnold Edward	bs	Gardner	East, 23
Thissell, Paul Edwin	ab	E. Saugus	Sumner St.
Trimble, Alfred King	bs	Cambridge	1137 Mass. Ave.
Tucker, Joseph Robley	ab	Berlin, N, H.	Dean. 10
Tyler, Maurice Leslie	bs	W. Medford	Z Y House
Walker, Edgar Ruston	bs-bd	Cambridge	140 Magazine St.
Weston, Ralph Dewey	ab	W. Bridgewater	West, 16½
Whitmarsh, George Freeman	bs	E. Braintree	West 4
Winer, Hyman William	bs	Dorchester	ΦEΠ House
Winston, Frank Thomas	bs	E. Boston	53 St. Andrew Rd.
Woodward, Clarence Harvey	ab	Tyngsboro	West, 27

#### Unclassified Student

bs	Boston	57 Auburn St.
bs	Collinsville, Co	$nn.$ $\Phi \Delta$ House
bs	Malden	19 Earl St.
bs	Dorchester	307 Harvard St.
bs	Dorchester	124 Devon St.
	W. Roxbury	148 Stratford St.
bs	Cambridge	95 Raymond St.
bs		
	Υ.	M. C. A., Somerville
ab	Fall River	157 College Ave.
bs	Chelmsford	West, 17
bs	Worcester 2	144 Main St., Malden
bs	Lowell	East, 21
bs	Sierra Madre,	Cal. Dean, 5
	bs bs bs bs bs bs bs bs bs	bs Dorchester bs Dorchester W. Roxbury bs Cambridge bs Bedminster, Pa Y. ab Fall River bs Chelmsford

# Special Student

Towne, Carlton George	New Bedford	East, 13
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# Supplementary List

(Students present during the second semester of 1915-16, but not appearing in the catalogue.)

Colcord, Elmer Danforth	bs-bd	Pittsfield, Me.	Paige, 7
Ludden, Hobart Hayes	Ъs	Waltham	20 Lexington Terrace
Olson, Wallace Bruce	Бs	Somerville	741 Broadway

# Crane Theological School

#### SIX-YEAR COURSE

#### Sixth Year

Bisbee, Eleanor

A.B., 1915

Bisbee, John Bancroft

A.B., 1916

bd Arlington Heights Richardson, 1

bd Arlington Heights Paige, 31

Fifth Year

Mark, John Nicol bd Glasgow, Scotland Paige, 18
A.B., 1916

Fourth Year

Colcord, Elmer Danforth bs-bd Pittsfield, Me. Paige, 7 Whippen, Elbert Wilder ab-bd Kingston, N. H. Paige, 13

Third Year

Cole, Alfred StorerbdBuckfield, Me.Paige, 19Miller, Herbert Dwightbs-bdPaige, 3Smith, IsaacbdEnglandPaige, 27

Second Year

Baird, Arthur Earle bs-bd So. Boston Paige, 25 Hubon, Charles Wilson ab-bd Salem

First Year

Walker, Edgar Ruston bs-bd Cambridge 140 Magazine St.

Special Students

Lawrence, Charles Norwood Worcester Paige, 13
Young, Gardner Lewis Peabody Paige, 12

Unclassified Student

Mills, George Grover Boston 198 Clarendon St.

Post-Graduate Student

Orito, Joseph Chusaku Hokkaido, Japan Paige, 30

# Supplementary List

(Students present during the second semester of 1915-16, but not appearing in the catalogue)

Ing in the catalogue)

Colcord, Elmer Danforth bs-bd Pittsfield, Me, Paige, 7

# Jackson College for Women

# Senior Class

Cochran, Margaret	bs	Medford	34 Hancock St.
Cogswell, Almena	ab	Winchester	Metcalf, 3
Crocker, Helen Beatrice	bs	Portland, Me.	Metcalf, 4
Dean, Marjorie Grace	bs	Winthrop	Alpha House, 1
Higgins, Helen Beatrice	ab	Andover	Metcalf, A
Jameson, Helen Marion	ab	Brookline	Metcalf, B
Mansfield, Nellie Birkenhead	ab	Everett	Richardson, 9
Moody, Beulah Borden	ab	Chelsea	Richardson, 3
Parshley, Esther	ab	Winchester	Metcalf, 14
Pease, Dorothy	ab	Tufts College	205 College Ave.
Raymenton, Marion Ward	ab	Cavendish Vt.	Richardson, 8
Rowe, Helen Almira	ab	Winchester	Richardson, 1
Simpson, Mildred Brooks	bs	Winthrop	Metcalf, C
Wheet, Geneva Alice	ab	Bristol, N. H.	Metcalf, C

# Junior Class

Briggs, Katherine Emma	ab	W. Medford	150 Arlington St.
Crosby, Genevieve	ab	Hingham	Metcalf, 1
Danver, Anna Dorothea	ab	Glenbrook, Conn.	Alpha House, 5
Davies, Jane Stodder	ab	Tufts College	72 Professors Row
Deasy, Ella Marie	ab	Chelsea	98 Grove St.
Durkee, Margaret	ab	Tufts College	38 Professors Row
Glass, Ellen Melissa	bs	Lexington	Concord Ave.
Lewis, Grace Melden	ab	W. Somerville	44 Kidder Ave.
Morse, Laura Lucile	ab	Arlington	41 Brantwood Rd.
Newcomb, Bertha May	bs	Portland, Me.	Metcalf, 11
Nickerson, Muriel Nathalie	ab	Chelsea	Richardson, 3
Perkins, Madeline Abby	bs	Lynn	Metcalf, 8
Sargent, Elizabeth Tilton	ab	Winter Hill	Alpha House, 4
Semons, Gladys Milford	ab	Manchester	Metcalf, 16

Sophomore Class					
Brooks, Ruth Elvira	ab	W. Medford	40 Warren St.		
Bullard, Cecelia	ab	W. Somerville	21 Kidder Ave.		
Cole, Ruth Jeanette	ab	Everett	173 Broadway		
Ferris, Julie Marguerite	ab	Medford	15 Stoughton St.		
Goldshine, Meriam	bs	Everett	12 Bailey St.		
Haynes, Gertrude May	bs	Maynard	Metcalf, 2		
Hill, Marion Calvin	ab	Dorchester	5 Carmen St.		
Hinckley, Hilda	ab	Hyannis	Alpha House, 3		

ab	Everett Metcalf, 2
ab	Fitchburg Metcalf, 4
bs	Laconia, N. H. Metcalf, 7
ab	Ballard Vale Chester St.
ab	Somerville 62 Main St.
ab	Ivoryton, Conn. Richardson, 4
ab	Derry, N. H. Alpha House, 1
ab	Burlington
ab	N. Grosvenor Dale, Conn. Metcalf, 2
ab	Medford 41 Koyal St.
ab	Melrose Alpha House, 6
ab	Manchester, N.H. Gamma House, 2
bs	Montpelier, Vt. 55 High St., Everett
ab	Medford 112 Dudley St.
	ab bs ab bs

# Freshman Class

Balzer, Anita Elizabeth	bs	Meriden Conn.	Gamma House, 7	
Bennett, Marion Ruby	bs	Westbury, N. Y.		
		56 M	arshall St., Medford	
Bernard, Madeline Elizabeth	ab	Medford	155 Jerome St.	
Berry, Gertrude Wells	ab	Andover	Metcalf, 13	
Brainard, Barbara Enola	ab	Somerville	82 Munroe St.	
Brainard, Carolyn Lucie	ab	Somerville	82 Munroe St.	
Bremner, Elsie Macdonald	ab	W. Somerville	17 Russell Rd.	
Caverno, Elizabeth Sherman	ab	Lowell	Richardson, 6	
Chilson, Grace Louise	bs	Franklin	Metcalf, 10	
Clark, Emily Maud	bs	CampHill, Ala.	Richardson, 2	
Clarke, Geraldine Kendall	ab	Malone, N. Y.	Metcalf, 14	
Cunningham, Dorothea Patricia	ab	Medford	64 Magoun Ave.	
Cushing, Irene	bs	Bethel, Vt.	Metcalf, 10	
Davis, Marie Viola	ab	Winchester	59 Parkway	
Faunce, Madeline Maria	bs	Mattapan	1407 Blue Hill Ave.	
Gallagher, Dorothy	lis	Dorchester	Metcalf, 6	
Glawson, Mildred Burton	bs	Somerville	Gamma House, 6	
Grant, Mary Agnes	ab	Beverly	Gamma House, 3	
Hannon, Martha Helen	ab	Winter Hill	108 Thurston St.	
Higgins, Agnes Blanche	ab	Andover	Metcalf, 13	
Hudgens, Helen Inez	ab	Ipswich	Gamma House, 8	
Jerauld, Phyllis Eldredge	ab	Barnstable	Alpha House, 3	
Kelley, Elfreda Alice	ab	Marlboro, N. H.	Gamma House, 9	
Kimball, Margaret	ab	Dorchester	35 Moultrie St.	
Knight, Irma Jeanneatte	bs	Somerville	175 Pearl St.	
Lane, Rachel Perin	ab	Cambridge	Metcalf 9	

Lewitzky, Esther Sara	bs	Roxbury	Gamma House, 1
Lynch, Margaret Esther	bs	Salem	Richardson, 5
MacDonald, Evelyn Frances	bs	Chelsea	49 William St.
Marston, Edna Gertrude	ab	Somerville	81 Liberty Ave.
Matheson, Orpha Barnard	ab	Provincetown	Richardson, 10
Moon, Dorothy	bs	Chelsea	Richardson, 4
Ohse, Amelia Elizabeth	ab	Somerville	5 Pearson Ave.
Parker, Madeline Lucille	bs	Dorchester	Richardson, 7
Partridge, Aphra Marion	ab	West Medford	105 Boston Ave.
Peirce, Marion Appleton	ab	Arlington Heigh	hts 11 Appleton St.
Perkins, Lillian Muriel	ab	Medford Hillsia	le 12 Emery St.
Phillips, Marion Louise	ab	Salem	Metcalf, 7
Pigott, Madeleine Grace	bs	N. Woburn	19 Ward St.
Prager, Hortense Lucille	bs	New York	Metcalf, 15
Rankin, Virginia Davis	ab	South Easton	Metcalf, 15
Rathburn, Georgia Ruth	ab	Marlborough	Gamma House, 10
Reed, Madeline Winifred	ab	Woodstock, Vt.	
		•	St., W. Somerville
Rockwell, Doris	bs		Powder House Blvd.
Shaw, Dorothy	bs	Marblehead	Richardson, 5
Slaughter, Mary Frances	ab	Camp Hill, Ala.	Richardson, 2
Starks, Gertrude Ethel	bs	Somerville	99 Glenwood Rd.
Sundelöf, Karin Cecelia	ab	Roxbury	88 Moreland St.
Symmes, Marion Brooks	bs	Winchester	10 Winthrop St
Trott, Marian Everson	ab	Winchester	Richardson, 11
Tucker, Dorothy Frances	ab	New Dorp, N. Y	Richardson, 6
Walker, Adèle Elvira	ab	Braintree	33 Sherbrooke Ave.
Walker, Martha Doris	bs	Newmarket, N	H. Gamma House, 4
Ware, Kennetha Marguerite	bs	Tufts College	101 Capen St.
Wilde, Doris	ab	Fairhaven	Alpha House, 7
Wonson, Isabelle	bs	Fall River	
			Ave., W. Somerville
Worth, Isabella Frances	bs	Nantucket	Gamma House, 3
Yerrinton, Margaret Johnston	ab	Arlington	59 Jason St.

# Unclassified Students

Connolly, Margaret Agnes	bs	Chelsea	220 Parkway
Lewis, Laura Wright	аБ	West Somerville	44 Kidder Ave.
Robinson, Ruth Madaline	аБ	Worcester	Metcalf, 12
Snow, Kathleyne Swift	аБ	Biddeford, Me.	
Morse, Vena	Бs	York Village, Me.	
		10 Oakland Ave., A	rlington Heights

# Special Students

Adams, Mildred Chamberlain, Dorothy Dean Rochester, Minn. Gamma House, 5
Boston Richardson House

# Supplementary List

(Students present during the second semester of 1915-16, but not appearing in the Catalogue.)

Perkins, Doris

ah Burlington

# Engineering School

# Senior Class

Adelson, Louis	ce	Chelsea	ΦΕΠ House
Atkins, Arthur Randolph	ce	Roslindale	A T Ω House
Baldwin, Gilbert Edward	ch e	Roxbury	East, 25
Brown, Horton	ee	Marblehead	West, 22
Burbank, Colby Lewis	се	Revere	ΔT Δ House
Connor, Bernard Dominic	се	Somerville	East, 5
Davis, Chester Thomas Caverly	st e	Wolfeboro, N. H.	Φ Δ House
Earle, Chester Reed	me	Lawrence	θ Δ X House
Foster, Elliot Chandler	ch e	Medford	Commons Club
Heileman, Calvin Marx	st e	Plaistow. N. H.	Σ T A House
Holmgren, Viking Raymond	me	E. Lynn	East, 5
Knowles, Mahlon Gilman	me	Swampscott	East, 3
Kraus, Benjamin Franklin	me	Jamaica Plain	West, 9
Merritt, Warren Franklin	ce	Galveston, Tex.	A T Ω House
Milliman, Frank Cooley	st e	W. Somerville	ΔT Δ House
Mortenson, Ernest Dawson	ce	Bedford	East, 1
Nichols, Byron Franklin	me	Methuen	East, 1
Ransom, Lake Smith	st e	Longmont, Colo.	29 Sawyer Ave.
Stowell, Edson Bancroft	st e	Jamaica Plain	ATΩ House
Terhune, Edward Andrus, Jr.	st e	Dorchester	ΔΥ House
Terry, Warren Franklin	me	W. Somerville	108 College Ave.
Wahlen, Frank Gustave	me	Montpelier, Vt.	East, 12

# Junior Class

Aronson, Jesse Moses	st e	Boston	ΦEII House
Bearse, Edwin Wilton	ee	Somerville	Commons Club
Briggs, Albert Jeffries	me	Watertown	ΔΥ House
Carr, Philip Amory	ch e	Lawrence	Commons Club
Clark, William Wells	се	Waltham	East, 15
Cobb, Forrest Willard	ch e	Waltham	ΔT Δ House
Drummey, James Joseph	ch e	Revere	West, 11
Ferreira, Mizael Lemc	се	Braganca, Brazil	
		47 Ba	tavia St., Boston
Gallen, Francis Lawrence	се	Somerville	600 Broadway
Highriter, Harry Walter	ch e	Meriden, Conn.	ZΨ House
Hodgdon, Melvin Wyman	me	Somerville	8 Indiana Ave.
Kelly, John Louis	ce	Arlington Heights	32 Appleton St.
Leland, Harold Bickford	ch e	Somerville	ΣTA House
Loring, Warren Edward	се	Charlestown	9 Cedar St.
McCarthy, John Joseph, Jr.	ch e	Somerville	220 Summer St.

McCarthy, John Michael, Jr.	се	Natick	East, 28
MacDonald, Norman Duncan	ce	Melrose	58 Howard St.
Mitchie, George Arthur	me	Lexington	$\Phi \Delta$ House
Moore, Ronald Roberts	ce	W. Somerville	I Kenwood St.
Nash, James Francis	ch e	E. Bridgewater	Z Y House
Nichols, Alfred Richard	me	Dorchester	Z Δ House
Norton, Edward Howd	ch e	N. Westchester, Con	
O'Marra, Frank Joseph	ee	Kingston, N. Y.	θ Δ X House
Porter, Leo Augustus	st e	Stoughton	A T Ω House
Powers, Harvey Marcellus	me	Hollis, N. H.	$\Theta \Delta X$ House
Rice, Harold De Blois	ch e	Somerville	Σ T A House
Russell, Herbert Burgoyne	st e	Jamaica Plain	A T Ω House
Segal, David	ch e	Roxbury	ΦΕΠ House
Smith, Christopher Ilsley	ee	Chatham	ΣTA House
Spaulding, Paul Pickering	st e	Dorchester	Σ T A House
Swanson, George Swen	me	Dorchester	ΣTA House
Tentler, Lewis Aaron	ee	Dorchester	ΣTA House
Waghorne, Charles Albert	се	Melrose	Commons Club
Wainwright, Stuart Frederick	ce	Andover	Paige, 29
Waite, Clayton Byron	се	Fort Ann, N. Y.	187 College Ave.
Waldo, Hollis Thurlow	me	Groveland	Commons Club
Walker, William Edward	ch e	Orange	A T Ω Hoùse
Walters, James Willard	ее	Washington, D. C.	Dean, 13
Waters, Mendal	се	Roxbury	ΦΕΠ House

# Sophomore Class

Abbott, Robinson	Malden	Commons Club
Baker, Edwin Davis Jr.,	Melrose	Commons Club
Baker, Theodore Edward	W. Somerville	20 Grove St.
Bickford, Jason Frederick	Somerville	West, 6
Bloom, Wolfred George	Lynn	13 Carleton St.
Bronski, Leo Max	Dorchester	ΦΕΠ House
Bullard, Walter Dudley	Dorchester	East, 14
Clough, Woodman Walter	Stoneham	66 Wright St.
Cogswell, Burnham	Essex	East, 17
Davis, Daniel Louis	Kendal Green	East, 20
Davis, Edward Harrington	Saugus	II Taylor St.
DeFoe, Joseph Harry	Chelsea	105 Library St.
Derby, Charles Howard	Peabody	West, 3
Dewey, Edson Eugene	Brookline	8 Cypress Place
Entwistle, Guy Russell	Tufts College	21 University Ave.
Finnell, Norman Croft	Cambridge	66 Wendell St.
Ford, Horace Hills	W. Somerville	58 Bromfield Rd.

Gallagher, Frank Joseph	Somerville	81 Benton Rd.
Harris, Richard Treat	Norwalk, Conn.	Δ Υ House
Hawker, Leslie Ward	Wheeling, W. Va	. West, 8
Hayward, Ernest Lincoln	Arlington	East, 2
Higgins, Elliot Wight	Dover	Φ Δ House
Horenstein, Alexander	Tientsin, China	ΦEΠ House
Hudson, Abel Clifford	Auburn, N. Y.	East, 2
Hunnewell, Roger	Somerville	θ Δ X House
Kimball, Harold Francis	Arlington	129 Broadway
Kneeland, Frank Coleman	Waban	1249 Beacon St.
Judd, Rolland Frederick	Allston	West, 6
Lincoln, Frank William, Jr.	Somerville	45 Oliver St.
Lovejoy, Julian	Littleton	Dean, 7
MacOnie, George Watson	Tufts College	Commons Club
Marshall, Irving Davis	Everett	71 Summer St.
Moodie, William Carmichael	Jewett City, Conn	$\Delta \Upsilon$ House
Parnell, Eric	Medford	Commons Club
Pennucci, Alexander	East Boston	75 Neptune Rd.
Philpott, Herbert Charles	Arlington	285 Mass. Ave.
Pinkham, Harold Lloyd	West Medford	69 Sagamore Ave.
Piper, Arthur Maine	Medford Hillside	312 Boston Ave.
Porter, Arthur Bray	Salem	A T Ω House
Reynolds, Kenneth Cass	W. Somerville	231 Morrison Ave.
Rich, Richard Augustus, Jr.	Truro	East, 10
Rosenthal, Edward	Chelsea	119 Franklin Ave.
Scarlett, William Alfred	Lynn	37 Lake Ave.
Shepherd, Harold Nichols	Lynn	West, 6
Stiles, William Harvey	Sudbury	East, 10
Walsh, James Henry	Somerville	122 Prospect St.
Woodill, Harold William	Melrose	Commons Club
Zulalian, Badrig Barsam	Boston	16 Waltham St.

#### Freshman Class

Adams, Walter Leslie
Andersen, George
Ashton, Henry Clark
Baker, David A.
Baker, Samuel
Barrow, William Beasor, Jr.
Benson, Henry Wilhelm
Besse, Harry William
Boyle, James Joseph
Bradley, Robert Ivan

Milford West, 29 Medford 128 Sheridan Ave. Somerville 33 Columbus Ave. Boston 42 Genesse St. 33 Bay State Ave. W. Somerville Birmingham, Ala. East, 8 West Somerville 6 Boston Ave. East, 20 Wareham Dorchester 48 West Tremlett St. N. Weymouth 4 Shore Drive

Charlestown

Brady, Albert Francis Brainerd, Edward Wendell Brothers, George William Chernaik, Myer Joseph Clarke, John Haggett Coffin, Arthur Alfred Cole, Russell Eliot Conn, Franklin Earle Cook, William Alfred Crosby, Edwin Winslow de Faria, Joas Jorge Delaney, J. Frank Demirjian, Nash Manook Dolton, Raymond William Doucet, Wm. Henry Dunham, John Wetherbee

Ewell, Robert Manning Farrell, Roger Wendell Finnegan, George Henry French, Clarence Bates Gifford, Frederick Anthony Gillmore, Reginald Waldo Ginsberg, Joseph Charles Gladu, Francis Raymond Graves, Herbert Cornelius Gray, Lewis Oscar Green, Richard Winthrop Hartwell, Warren Emerson Hastings, Raymond George Haworth, Richard Heald, Harold Francis Herald, Charles Raymond Hobbs, Edwin Jorgensen, William Kagan, Maurice Kelley, Thomas Urban Knight, Hugh Chatfield Lagergren, Berthel Ludvig Libman, Harry Logan, Ross Wendell London, Harry MacCharles, Howard Kenneth

50 Pleasant St. Dorchester 13 Upland Ave. Hudson West, II East Boston 159 Chelsea St. Somerville 35 Montrose St. Chelsea 4 Murray St. Somerville 22 Edmands St. Auburndale West, I Littleton West, 14 West Medford 52 Monument St. Brazil 28 Dearborn Rd., Medford Dorchester 19 Hervins St. Newton Centre 67 Union St. Lvnn 154 Tracy Ave. Wakefield 37 Bennett St. W. Somerville 120 Powder House Blad. Medford 136 Washington St. Cochituate Pond St. Stoneham II Dean St. Waltham East, 15 Woburn 25 Lawrence St. N. Weymouth 46 Squanto Rd. East Boston 33 Decatur St. Cochituate Stanton St. Washington, D. C. East, 8 Saugus 18 Emory St. Winthrop East, 28 Littleton Dean, 7 Weston Dorchester ΔT Δ House Somerville 171 Powder House Blvd. Everett ATΩ House Everett West, 19 335 Walk Hill St. Roslindale Boston 77A Revere St. Revere 25 Summer St. Melrose Highlands 132 Melrose St. Osterville West, 13 Dorchester I Page St. 570 Trapelo Rd. Waverley Φ E II House Dorchester Commons Club Peabody

Macdonald, Donald Lewis MacIlvain, Karl Messenger Marshall, Donald Leslie McAuley, Raymond Hellery McGee, Harry Shirl McNamee, Arthur Edward Merrill, Carl Bixby Mitsch, John Donald Mitsui, Takamichi Mohan, John Patrick Morgan, Carl Leon Morse, Arthur Lewis Moses, Howard Leslie Pearlmutter, Hyman Peterson, George Harry Pollard, James Joseph, Jr., Porter, Harold Hill Pride, Alfred Melville Purinton, Norman Wilson Ratti, Augustus Peter Riley, Albert Joseph Germond Roberts, Edward Bird

Robertson, Warren Madison Rockwell, Donald Edward

Rockwell, Walter Francis Ryan, Harold Lyman

Sabine, Edward Dana, Jr., Scarlett, Edward George Shoolman, Dave Leveton Simanofsky, Louis

Sparrow, Valentine Zens Sproviero, Frank Joseph Sullivan, Francis Daniel Tibbetts, Frank Alliston Turner, Alfred Edward Waage, John Charles Jr. Wallace, Merrill Gregory Waugh, Harry Edgar Wiegand, Joseph Nicholas

W. Somerville 72 Bristol Rd. Jamaica Plain Dean, 3 W. Somerville II Bay State Ave. W. Somerville 35 Lowden Ave. S. Chicago, Ill. East, 6 Waverley East, 16 Medford 99 Park St. Mattapan 10 Hazleton St. New York, N.Y. Paige, 36 Lynn 51 Mall St. Wolfeboro N. H. Φ Δ House Watertown Commons Club W. Somerville 50 Meacham Rd. Allston 4 Everett Sq. Woburn 50 Lake Ave. W. Somerville 1091 Broadway Salem East, 13 Somerville 150 Hudson St. Everett 19 Hampshire St. W. Everett 179 Bucknam St. Chelsea 61 Bellingham St. Hyde Park 53 Chandler St., W. Somerville Revere 42 Page St. W. Somerville 133 Powder House Boulevard West, 21 Dorchester Rio de Janeiro, Brazil, S.A. ΣTA House Yonkers, N. Y. East, 19 Lynn Commons Club Malden ΦΕΠ House Portland, Me. 21 Middlesex St., Boston 435 Eastern Ave. Malden Stamford, Ct. 80 Myrtle St., Boston S. Boston 56 N St. 223 Morrison Ave. W. Somerville Auburn, N. Y. West, 31 Arlington 16 Central St. W. Somerville 83 Irving St. Somerville I Lexington Ave. Armington, Mont. East, 7

Wilson, Edmund Geddes	Dorchester	3 Grant Road
Wilson, Harold Olni	New York	East, 19
Wolk, Louis	Malden	37 Magnolia St.

#### Unclassified Students

Fellows, Richard Charles	West Somerville	771 Broadway
Leseur, Charles Benjamin	Hyde Park	Dean, 5
Maker, Charles Gilbert	Fall River	East, 9
Palmer, Ralph Buel	Lowell	West, 21
Spencer, Edward	Boston	97 St. Stephen St.
Rafferty, John Herbert Joseph	Cambridge	341 Columbia St.
Rosenauer, Moses Bernard	Somerville	100 Pearson Ave.
White, Wallace Tirrell	N. Attleboro	

# Special Student

Gray, Thomas Francis	W. Somerville	West, 25
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# Supplementary List

(Students present during the second semester of 1915–16, but not appearing in the catalogue.)

Sparrow, Valentine Zens	Malden	435 Eastern Ave.
Voss, William Charles	Hartford, Conn.	East, 21

# Bromfield-Pearson School

Boston	83 Poplar St.
Ashmont	3 Clemont St.
Revere	74 Beach St.
East Boston	160 Leyden St.
Worcester	733 Columbia Rd.
Everett	16 Everett St.
Cambridge	3 Walker St. Place
Boston	25 Concord Sq.
Roslindale	East, 9
Fall River	East, 32
Revere	1 Oliver Ter.
New Haven,	Conn. West, 30
Revere	114 Shirley Ave.
Dorchester	53 Olney St.
	Ashmont Revere East Boston Worcester Everett Cambridge Boston Roslindale Fall River Revere New Haven, Revere

Merrill, Donald Hersey	Cambridge	60 Walker St.
Morash, Arthur Fenwick	Arlington	27 Fairmont St.
Ratta, James Albert, Jr.,	W. Medford	13 Holton St.
Spear, Henry Thompson	Nashua, N. H.	West, I
Stuart, Henry Alfred	W. Somerville	100 Pearson Rd.
Summerville, Alan Oliver	Roslindale	109 Walter St.
Tilton, Warner Belknap	Raymond, N. H.	
Walsh, Joseph Patrick	Somerville	122 Prospect St.

#### Graduate School

#### Resident Students

FOSTER, FRANCIS JOEL	Danbury, Conn.	Paige, 15
A.B., 1916 History and Pu	iblic Law and Political	Science
HASKELL, RUTH SIBLEY	Brookline	22 Garrison Rd.

A.B., 1906 Second Year History and Public Law

HAYWARD, ELEANOR Metcalf Hall

B.S., 1915 (Simmons) First Year Political Science

LAMONT, RICHARD ROY W. Somerville 76 Maple St., Malden A.B., 1912 Second Year Music and Modern Languages

## Special Student

ORITO, JOSEPH CHUSAKU Hokkaido, Japan Paige, 30

B.S., 1915 Philosophy

#### Non-Resident Students

CHENEY, GENEVIEVE HENRIETTA Mt. Vernon, N. Y. 25 Park Ave. A.B., 1906 First Year French

Lybeck, Robert Ferdinand Everett 36 Highland Ave. B.S., 1915 First Year Chemistry

# One-Year Pre-Medical Course

[P. O. Address, 28 Mechanics Street, Boston, Mass.]

And The Act of Trees.						C: 17 777 17
Abel, Frederick Louis						
Adelman, Harold Louis						
Allen, Frank Alexander Ros						
Barritt, Robert James						
Barron, David						
Baxter, George Raymond .						
Benaglia, Carl Peter						
Berkowitz, Arthur						
Berman, David		٠			٠	. Boston
Biddle, Stephen Mulford						. Thornton, N. H.
Blair, Jesse Benjamin			٠	٠		. Jacksonville, Fla.
Block, Harry				٠	٠	. Boston
Bloom, Abraham						. Boston
Bousquet, Franklyn Philip .						. Worcester
Bradshaw, George Lane						. Lawrence
Breslin, James Edward						. Providence, R. I.
Bunnell, Stuart Dyer						
Burns, Leo James						7.511.0
Burr, Elsie Parkinson						. Boston
Caldarone, Angelo						
Caldicott, George Francis .						
Carter, John Adams						
Chandlee, Gertrude Jackson						
Chapnick, Maurice Max						
Chilson, George Robert						. North Adams
Clark, Omar Lawrence						
Cody, John Michael						
Cohen, Julius William						
Coleman, Robert Martin						
Collinson, Arthur William .						
Conlon, George Avery						
Conlon, George Tivery						
Conroy, Augustine Edward.						
Cook, Robert Louis						
Cronin, Edward Joseph						
Curtin, James Henry, Jr						
Davis, Thomas Francis						

Dee, William John South Boston
Derrick, Leonard Stanley
Dewing, Norman
Dowd, Aloysius Francis
Dressler, Morris Lawrence Springfield
Easterling, Ruth Marguerite North Cambridge
Favaloro, John Lynn
Federkiewicz, John
Feingold, Ephraim Worcester
Fielding, Bennett Irving Worcester
Fishelson, Fanny Beatrice Roxbury
Fulstow, Marjorie, A.B. (Lake Erie College) . Norwalk, Ohio
Gaber, Nathan
Gagnon, Alphonse Paul Fall River
Gagnon, Mabel Marie Livermore Falls, Me.
Gibson, David Howard Cambridge
Gilpatrick, James Matthews South Berwick, Me.
Givan, James Alexander Somerville
Glebow, Eleanor Jamaica Plain
Glickman, Alfred Myron Springfield
Goldstein, Henry
Goodman, David Solomon
Gordon, Samuel Morris Boston
Gorshel, David Herman
Grandfield, Robert Francis Dorchester
Griffin, Charles Henry Fall River
Grogan, Michael Joseph
Grumley, Martin Edward Boston
Haroutunian, Garabed Chelsea
Harris, Paul Leon Lowell
Hartigan, John Joseph Andover
Hauman, Ralph Nathan Revere
Hazen, Bernice Merriam Manchester, N. H.
Hemenway, Ruth Victoria Williamsburg
Higgins, Ernest Russell Milton
Hinchey, Richard James
Hogan, Charles Henry, Jr Salem
Hooper, Raymond Ernest Mavnard
Howe, Paul French
Jasspon, Moses Bernard
Johnson, Alphonsus Warren
Johnson, Valeria Berenice
Josselson, Israel Portland, Me.
2

Kelly, Earl Francis Pawtucket, R. I.
Kontoff, Henry Arthur Dorchester
Kreplick, Morris Spellman Boston
Lanigan, William Nicholas Marlboro
Laserson, Joseph
Leavitt, George David Boston
Lefort, Gerald Adrian
Levine, Elijah Louis Lynn
Lezberg, Joseph
Listernick, Sidney Solomon Everett
Locke, Sophie Arlington Heights
Lombardi, Pasquale Frederick Boston
Lyen, Charles Lewis Everett, Washingto
MacDonald, Ralph Reed Burlington
Mackler, David Abram New Bedford
Marchand, Jean Charles Salem
Matzek, Neil Clayton Revere
McCarthy. Francis Wesley Roxbury
McGrath, Laurence Wilfred Roxbury
McKeough, Wilfred Aloysius Boston
McQuade, Frank Joseph
McQuade, Thomas Henry
Melvin, Edward Gerald Pawtucket, R. I.
Merriam, Joseph Chapman, A.B. (Harvard Univ.) Framingham
Mezer, Joseph Henry
Minah, Franklin James Franklin, N. H.
Mitchell, Isadore
Montanaro, Austin
Moulton, Lillian Gertrude
Murphy, Arthur John
Ney, Thomas Joseph
Nichols, Brayton, A.B. (Harvard Univ.) Worcester
Normandin, Marguerite Alice Laconia, N. H.
Novack, Hyman Allen Dorchester
O'Connell, William Henry Foster Bridgeport, Conn.
Olim, Jacob Joseph South Boston
Orismonto, Carlo Altobelli Jamaica Plain
Orr, Charles Waldron
Paquette, Charles Albanie
Parker, George Leonard
Paul, Mary
Peck, Albert Luther Spencer
Petrillo, Carmen Ralph
Territor, Carmen Raipin

Pollack, Bernard
Portnoy, Maurice New Bedford
Power, Arthur Chester South Boston
Rainville, Rosario George
Riendeau, Fernand Maurice Worcester
Ross, Florence Mirick Dorchester
Ryan, James Patrick Salem
Sala, Ralph della
Seliber, Samuel Harold
Shea, Daniel William Bellows Falls, Vt
Siegel, Louis Revere
Sigourney, David Rives, A.B. (Harvard Univ.) . Boston
Silbert, Harry
Silvernail, Raymond Warren Salem
Skvirsky, Solomon Louis
Soforenko, Harry Providence, R. I.
Spaulding, Earle Everett Lowell
Spiva, Charles
Springer, Ernest
Stochaj, John William
Sullivan, Harold Albert
Sullivan, Jeremiah Vincent Fall River
Sweeley, Crawford Kenneth
Tartakoff, Samuel
Thompson, James Allan North Hanover
Tirk, Henry Saul
Tober, Jacob Benjamin
Walsh, John Francis
Watman, Anthony Joseph Lynn
Williams, John Francis
Young, Ernest Thomas
Yunitz, John, Jr Everett

# Medical School

[P. O. Address, 416 Huntington Ave., Boston, Mass.]

#### Fourth Year

(To graduate in June, 1917)

Adams, Edward Augustus Fitchburg
Ash, Richard Maurice West Quincy
Atkinson, Frederick Charles Methuen
Banquer, Jacob Ellis Dorchester
Bolotow, Nathan Abraham Lonsdale, R. I.
Bridgwood, David
Brown, Abe Arthur Lawrence
Brown, Henry Seabury
Budreski, Alphonse Frank
Caruso, Septimio
Casey, Chester Arthur Ironton, Ohio
Cassidy, Franklin Chester Medford
Chisholm, Lawrence Chesley Salem
Churchill, Anna Quincy Dorchester
A.B. (Smith College), A.M. (Radcliffe College)
Clark, Millard Cressey Bethlehem, N. H.
Corea, George Thomas Boston
Crighton, Andrew John, Jr., A.B. (Trinity Coll.) East Hartford, Con.
Crimmin, Leo Philip
Cunha, Manuel Felix Somerville
Curran, Louis Frederic Fall River
Currie, Inez Margaret Needham
Dennett, Paul Carroll Portsmouth, N. H.
Doucet, Charles Stanislaus
Duffy, Edward Anthony Worcester
Fitzgibbons, Patrick Joseph
Fowler, Alma Evelyn Boston
French, Leland Malcom
Friederman, Elie Louis
Gallagher, Henry Joseph
Goddard, Fred Chambers Dover, N. H.
Gordon, Louis
Greenwood, Wilbourt Edward Riverside, R. I.
Hamburg, Miles Myer Everett

Hanlon, Morgan Patrick East Cambridge
Hart, Louis Park Marlboro
Haskins, Abraham
Heffernan, Roy Joseph Somerville
Hekimian, Jacob Hagop East Weymouth
Hoffman, Morris
Hooper, Anne Leslie, A.B. (Jackson College) . Tufts College
Hopkins, Lawrence Towle Somerville
Howard, Rhoda Letitia Troy, N. Y.
Jackson, Howard LaFayette Wells Bridge, N. Y.
Johnson, Lewis Wells Greenfield
Joslin, Royal Knight Worcester
Kable, Josephine Downie York, Penna.
Kaufman, Morris Frank
Kirby, James Caleb
Lipchutz, Charles Saul New Bedford
Loewe, Walter Ralph Dorchester
Logiodice, Leonard Francis South Boston
Long, Rufus Wilfred
MacCordy, Earl Cunningham
Macmillan, Alexander Stewart Boston
McDonald, Harry Leo Attleboro
McKay, Hugh Gordon
Medalia, David Bernard Dorchester
Meledy, Joseph Aloysius
Merritt, Edward Lester Fall River
Merritt, Robert Elmer Wollaston
Mills, Parker Lynn
Murphy, James Moore Norwich, Conn.
O'Connell, John Gabriel Bridgeport, Conn.
O'Neill, Elizabeth Veronica
Pettengill, Warren Martin
Rattey, Arthur Andrew Lawrence
Ring, Arthur Joseph Lynn
Rosenkovitz, Edward
Rudman, Benjamin William Roxbury
Salmon, Charles Augustus
Sarno, Avery Hugo Amsterdam, N. Y.
Schæfer, Jacob New Britain, Conn.
Segal, Samuel, Jr
Simons, Sigmund
Slater, Robert
Smith, Lillian Richardson Lawrence
,

Golini, Carlotta Nicholas Providence, R. I.
Gordon, John Hurter, B.A. (Univ. of South). Washington, D. C.
Grandison, Louis Julian
Greenberg, Boris Efim Dorchester
Gurjian, Leon Kevork Worcester
Harris, Walter Callahan Millbury
A.B. (Holy Cross Coll.)
Hatt, Rafe Nelson West Paris, Me.
Hillberry, Maud Eva Blue River, Wis.
Hook, Marion St. Leonards-on-Sea, England
Israel, Joseph Gilbert Fitchburg
Jankelson, Isaac Rudolph
Keefe, Frank Joseph
Kiley, Cornelius Joseph
Krepps, Raymond Miles Reading, Penna.
Lanois, Esdras Joseph Northboro
Litch, William Isidore, D.M.D. (Tufts College) . Roxbury
Lokrantz, Sven Richard Stockholm, Sweden
MacDonald, Joseph C Beloit, Kansas
Maroney, Frederick William Springfield
Mason, Harry Edison Cambridge
McAlpine, Alfred Freeman Somerville
McDonald, Ray Thomas, A.B. (Tufts College) . Medford
McNamara, John Ignatius
Meehan, James Morgan Somerville
Meltzer, Philip Edward, D.M.D.(Tufts College) Roxbury
Moran, Andrew Charles, A.B. (Holy Cross Coll.) Fall River
Morris, James Benjamin Jr Cape Verde Island, Portugal
Mulhern, Joseph Patrick, A.B.(Holy Cross Coll.) Worcester
Neill, Roberta Estella
Nickum, John Stanley Allentown, Penna.
Otis, Fessenden Newport Meriden, Conn.
Parker, Charles Clinton, Jr
Polakewich, Isaac
Pratt, Ernest Frederick Lowell
Robinson, Bernard Herman Roxbury
Rockwell, Llewellyn Harrison
Ruisi, John Edward Westerly, R. I.
Sannella, Salvatore
Saphirstein, Hyman
Sarason, Lillian Brooklyn, N. Y.
Shaw, John
Shubert, Julius Boston

# TUFTS COLLEGE

Steffen, Anna Elizabeth, A.B. (Oberlin Coll.) . Vermilion, Ohio

Stellen, Anna Enzabeth, A.B. (Oberni Con.) . Vermitton, Onto
Strammer, Myron Abner Jamaica Plain
Sullivan, Russell Francis Melrose
Swasey, Ednah Evitts Salem
Tanner, Monroe Julius Meriden, Conn.
Tooker, Harold Clifton, Ph.B. (Brown Univ.) . Larchmont, N. Y.
Trombley, Walter Vincent
Troupin, Abraham Solomon Boston
Van Gaasbeek, Harold Springfield
Villone, Anthony Joseph New York, N.Y.
Wheeler, William Davidson Roxbury
Woolverton, Edgar Frank
,,,,
Second Year
(To graduate in June, 1919)
Alden, Carmi Rupert Whitman
Barnard, Frederick Joseph Meriden, Conn.
Barstow, Carl Elijah
Bartlett, Frank Herbert, Jr
Baxley, Haughton Whitridge East Boston
Brackett, Nathaniel Parker
Bradley, John Francis, A.B. (Boston College) . Salem
Burke, John Edward, A.B. (Boston College) . South Natick
Byrnes, James Edmund Holyoke
Cappiello, Silvestro
Carey, Joseph Henry
Clare, Wendell Phillips
Connors, Raymond Earl
Cornelius, James Thambidurai
Davis, Harry Eugene
Dean, Ella Batchelder
Deitch, John
Dennen, Edward Henry
Devere, Earl Robert
Devin, William Francis
Donovan, William James Norwood
Dougherty, Edward Francis, Jr Woonsocket, R. I.
Dunphy, John Joseph, Jr North Brookfield
Dushinsky, Samuel Sidney East Boston
Eagan, Owen Louis Fall River
Econom, Peter James New York, N Y.
Entwistle, Clayton Ross Monson
Feldman, Louis

Fitch, Emmett Chandler Mooers, N. Y.
Fitzgerald, Joseph William Jamaica Plain
Fleury, Oswald Theodore South Norwalk, Conn.
Forsley, Thomas, Jr
Friborg, Joseph Nathaniel
Fryburg, Charles August
Gallagher, James Francis, A.B. (Boston College) Newton Centre
Gibson, Howland Allan Newport, R. I.
Gilman, William Henry
Goldberg, Max Menus Lynn
Golden, Harry Somerville
Gosian, Moses
Guzzetta, Anthony James
Henson, Paul Palmer Orleans
Hennigar, Beatrice Almore (A.B. Acadia Univ.) Chester Basin, N. S.
Honey, Florence Emerson Spencer
Hooper, George Henry Iron Mountain, Michigan
Iovanna, Nicholas
Israelian, Agnes Grace Burlington
Jackson, Edward Joseph Fall River
Johnson, Harold Henry East Boston
Kaplan, Jacob Copel Boston
Kinmonth, Raymond Arnold Brooklyn, Conn.
Koppel, William Boston
Korb, Harry
Korolick, George Gordon Boston
Lancey, Clifford Scales Townsend
Levethan, Samuel Theodore Boston B.S. (Tufts College)
Lindblad, Eric Harry Avon
Mackey, Charles Edward South Boston
Mahoney, Ralph Patrick Portland, Me.
Mahoney, William Anthony Providence, R. I.
Mandeville, Ernest Arthur
Martin, Arthur Ellerby
Matteo, Frank Irving
McDonald, William James Westboro
McDonnell, Joseph Leo
McGauley, Walter Gardner Boston D.D.S. (Georgetown Univ.)
McKenney, Frederick William Lynn
McKinnon, Donald Cuyler Lowell
Domaid Cuyler Lowett

McLaughlin, James Francis
McLaughlin, Joseph Henry East Weymouth
Mengel, John Hehn Frackville, Pa.
Meunier, Raymond Royale Indian Orchard
Milward, Francis William, Jr East Boston A.B. (Boston College)
Miner, Harold Cranston, A.B. (Brown Univ.) . East Greenwich, R. I.
Morein, Samuel
Mullen, Walter John, A.B. (Holy Cross College) Newton Highlands
Murphy, Albert Bernard Waltham
Murphy, John Micheal Abington
Nash, Francis Joseph Westboro
Nichols, Guy Edward Wilmington
Normandin, Louis Adolphus, Jr Swansea Centre
O'Connor, Alfred Smith Worcester
A.B. (Holy Cross College)
Ormsby, Edward Bernard Dorchester
Oslin, William Henry
Paige, Wilbur Myrtland Lynn
Penn, Harry Lawrence
Phillips, Karl Tristram Amesbury
Poirier, Armand Charles New Bedford
Powers, John Paul Worcester
Quinn, John Joseph James Revere
Raleigh, Walter Melvin Springfield
Reilly, William Edward
Resnik, Joseph, B.S. (Columbia Univ.) Roxbury
Reynolds, Frank Albert Dorchester
Rittner, Max
Robert, John Baptiste Wilfrid Tilton, N. H.
Rousseau, Wilfred Joseph New Bedford
Rowley, Philip William Gloucester
Ruggles, Ralph Hastings
Rust, George Stevens
Saunders, Sallie Harding West Medway
Savard, Arthur Joseph
Sawyer, Edward Julius Newtonville
Sciaraffa, John Maria East Orange, N. J.
Segal, Joseph Nathanial Boston
Shay, Edward Francis Fall River
Sheehan, George Timothy
Shohet, Henry Gabriel, A.B. (Colby College) . Portland, Me.
Silberg, Morris Abraham Boston

Silverman, William Yale
Steinberg, Naaman
Tanner, Walter Lewis Manchester, Conn.
Tashian, Hovnan Nazaret Boston
Terada, Osmu Sakai City, Japan
Tilton, Warren Norwood New Bedford
Vershbow, Nathan
Walsh, Jeffrey James, D.M.D. (Tufts College) Fall River
Webber, Joseph Bernard
Welch, John Laurence
Weymouth, Currier Clyde
White, Earl Russell
Whitehead, William Levi, A.B., (Clark Univ.) . Eastman, Ga.
Wolfson, Louis Elijah Roxbury
Wunderly, Walter Spencer Nazareth, Penna.
Yorshis, Philip
First Year
(To graduate in June, 1920)
(To graduate in June, 1920) Baker, Max
(To graduate in June, 1920)  Baker, Max
(To graduate in June, 1920)  Baker, Max
(To graduate in June, 1920)  Baker, Max
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(To graduate in June, 1920)  Baker, Max
(To graduate in June, 1920)  Baker, Max
(To graduate in June, 1920)  Baker, Max

Cunningham, Harold Dever
DeCesare, Nicandro Francis Lawrence
Desmond, Margaret Ellen Beverly
Dinneen, William Thomas Lynn
Dion, Deo Josepha
Dubins, Joseph Aaron Dorchester
Edmunds, Charles Storver Bangor, Me.
Gagnon, Jules Octave Manchester, N. H.
Galleani, Ilia Wrentham
Geist, Frederick Denkmar
Genest, Aloria Henry Indian Orchard
Gilroy, Lester James Attleboro
Glickman, Helen Sarah Spring field
Gould, Robert Louis
Grenberg, Charna Shanghai, China
Grossman, Samuel
Guijarro, Antonio Bayamon, P. R.
Hanson, Lester Arthur Worcester
Hanyszewski, Pauline Kathryn Ware
Harrington, Elmer Joseph Holyoke
Heimlich, Fred Lynn
Herrero, Blas Carlos Corozal, Porto Rico
Hogan, Daniel John
Horan, Thomas Benedict , Fall River
Horan, William Augustine Fall River
Ingalls, Raymond George Berlin, N. H.
Jellis, Walter
Joress, Mark Harry
Joyce, Roland Joseph Nashua, N. H.
Kamberg, Samuel
Kaplan, Edward Everett
Kaplan, Julius Arthur
Kassees, Saad Hanna Palestine, Jerusalem
Kerkhoff, Mary Edith Attleboro
Knowlton, Donald Swett Fairfield, Me.
Kotler, Moses George
Kramer, Louis Irving
Lavelle, Gertrude Helen
Lee, Frederick Morton
LeMarbre, Albert Edward
Levy, Phillip Earle
Littlehale, Roy Frederick

Lutecki, Bronislaw Boston
Lynch, Harold Francis
Mace, Roswell Greenwood
MacKinnon, Irville Herbert Attleboro
McCusker, Henry Francis Providence, R. I.
McLean, John Cassidy Joseph
McSweeney, Joseph Henry Somerville
Montgomery, David Henry
Moses, Alvin Raymond Lynn
Murphy, Thomas Burke Lynn
Nadel, Samuel Dorchester
O'Keefe, John Andrew, Jr Providence, R. I.
Olans, Herman
Oslin, John Francis
Park, Harry Linwood Revere
Pelchie, William Joseph Shelburne Falls
Pelletier, Emery Providence, R. I
Peterson, Carl Adrian Rudolph Falmouth
Randall, Guy Charles Lowell
Ransom, Roy Anderson Boston
Rice, Charles
Robbins, Herman Jamaica Plain
Roberson, Tracey Lloyd Tunkhannock, Penna.
Roberts, Harry Lewis Spring field
Rondeau, Leo Garrigan North Brookfield
Rosen, Kermit Charles Dorchester
Rotman, Nelson East Boston
Russell, Wilson James Manchester, N. H.
Ryan, James Bernard Easthampton
Ryan, John Newman Ware
Sacks, Albert David Henry Boston
Sawyer, Carroll Whitman, Jr Somerville
Siragusa, James Joseph
Smith, Stephen Munro Little Falls, N. Y.
Smith, William Russell, A.B. (Holy Cross) Taunton
Spitz, Jacob
Stamas, Theodore Albert
Stasio, Joseph
Sterns, Albert Henry New Bedford
Sterrn, Maxwell
Stone, Moses Jacob Dorchester
Sweeney, William Joseph Newburyport
Tumarkin, Morris Saul
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Veve, Miguel, Jr						. Luquillo, P. R.
Weinberg, Philip Barron						. Brockton
Weissman, Ruth						. Boston
West, Gustav Fredrick		ø				. Boston
White, John Bernard .				۰	ą	. Lawrence
Woodman, Marjorie						. West Medway
Zacks, David						. Taunton
Zelig, David	٠					. Haverhill
Zundell, Samelu Charles						. Fall River

# Dental School

[P. O. Address, 416 Huntington Ave., Boston, Mass.]

#### Third Year

(To graduate in June, 1917)

Bardwell, Emory Chester
Barnard, Robert Hyland Keene, N. H.
Barone, Anthony
Bearse, George Francis East Milton
Berg, Bernard Dorchester
Besse, Harlan Frederic West Concord, N. H.
Bixby, Helen Alva Marion East Lynn
Blumerfield, Israel Michael Boston
Cantor, Bernard Nathan New Bedford
Carr, Thurston Everard
Chase, Frank Leonard Portland, Me.
Cobb, Marion Julia Caryville
Coffey, Albert Gaffney Nashua, N. H.
Coggar, William Thomas St. John, N. B.
Coggins, Charles William Marlboro
Collier, Harry Conrad Worcester
Commins, John Francis St. Stephen, N. B.
Crites, Llewellyn Lloyd Lewiston, Me,
Crowe, Paisley Sommers South Braintree
Dawidowitz, Frida
Deane, Laura Belle Lowell
Delaney, Henry Raymond Fall River
Desmond, Frederick James Beverly
Deyoe, Ralph Jacob Vergennes, Vt.
Dick, John Gilbert Temple Boston
Dimmick, Meriel Lapham Newburyport
Dixon, Arthur, M.D., (Tufts College) Worcester
Donahoe, Theodore Patrick Winthrop
Donohoe, William Frederick Lowell
Doyle, Theresa Genevieve
Ellison, Arthur True Spencer
Ford, Wendell Phillips Dorchester
Foster, Alice Sara
Fox, Charles Joseph

Fox, Merwin Keith
Frechette, Eugene Louis
Fredette, Emile Raymond Linwood
French, Albert Everard Winthrop, Me.
Fuller, Frank, Jr Fall River
Garrard, Stanley Robert
Goldman, Samuel Boston
Goodell, Edward Clark Shelburne Falls
Goodridge, John Greenough Lynn
Gould, Ernest Moore Dedham
Grigg, Richard James Somerville
Gutterson, Philip Cheever Fair Haven, Vt.
Hall, Stanley Edward West Newton
Hardy, Irving Robinson
Harrigan, Clarence Wilfrid
Harrington, Joseph Gerard St. John, N. B.
Hart, Harry Asahel Palmer
Healy, Timothy Gerard West Newton
Henriques, Sydenham Cohen Boston
Henry, Edward Augustine Dorchester
Herlihy, John Patrick
Hird, Walter Irving Dorchester
Hoar, Martin Joseph Springfield
Hooker, Alfred Lothrop Southampton
Jewett, Fred Taylor
Jones, Harry Clinton Southampton
Kapochy, Anthony Lowis Shenandoah, Penna
Kearney, John Francis South Boston
Kedian, Harold Francis Swampscott
Killory, John Francis
Krasnoff, Charles William Dorchester
LaBonte, John Edward Webster
Lameri, Birney James
Litner, Maurice Allen Chelsea
Littlefield, Otis Moulton
Lockwood, Walter Eugene East Jewett, N. Y.
Lundgren, Raymond Axel Providence, R. I.
MacNeily, John North Cambridge
Mandelbaum, Harry
Martin, Willard Everett Boston
McCann, John Joseph Lowell
McCue, William Henry · · · · Milford
Mechaber, Benjamin New Bedford

Milliken, William Anthony Dorchester
Mintz, Anna
Moore, William Edward
Morse, Carlton Brett
Morse, Myron Clarke
Murphy, John Ralph Medford
Murray, Phillip Irving Revere
Orr, Lauriston Ellis Wilton, Me.
Owen, Richard Campbell Saco, Me.
Palmer, Arthur Todd
Palmer, Ray Huntress
Parker, Clarence Elwood East Lynn
Porter, David
Prizer, Alec
Rollins, Fred Goldsmith
Rosenbloom, Willis Abraham Boston
Ruggles, Everett Hale Boston
Ryan, Edward Francis Amesbury
Ryan, Edward Michael Lowell
Rye, Edwin Leroy Norwood
Saunders, John Thomas Webster
Sawyer, Bertram Hatch Salem
Sawyer, Robert Nims Manchester, N. H.
Scanlan, James Bernard
Schlichte, George Anthony South Boston
Segal, Samuel
Seidel, John Charles
Shapiro, Miriam
Shea, Michael Joseph Waverley
Sleeper, Edwin West Somerville
Smith, Abraham George Boston
Smith, George Richard Fall River
Smith, Herman Nelson Vineyard Haven
Smith, Isidore Wilfred Leominster
Speight, Stephen Lawrence East Longmeadow
Staples, Bernard Francis
Sternberg, Louis
Stewart, Donald Gordon West Fort William,
Ontario, Canada
Sullivan, Edward Francis Springfield
Swett, Alton Houghton Weld, Me.
Taft, Clarence Milton Keene, N. H.
Theriault, Wilfred Valentine Boston

Thompson, Ralph James.						. Lancaster, N. H.
Thorburn, Lloyd Mungo.						
Whitney, Harold Snell .			4			. Milford
Wildes, Robert Patten .						. Skowhegan, Me.
Williams, Arthur Francis						. West Quincy
Wilson, Arthur Clark		٠	٠		4	. Marblehead
Wollison, Hammon Louis]						. New Bedford
Wovsaniker, Louis	٠					. Brooklyn, N.Y.

# Second Year

# (To graduate in June, 1918)

Adams, Philip Edwin Farmington, Me.
Allan, Theodore DeWitt Gloucester
Allen, John Robert North Attleboro
Ames, Walter Frank North Attleboro
Audet, Joseph Achille Boston
Backman, Maurice Peter Lynn
Baker, Horace Earle North Attleboro
Bartlett, Charles Oscar East Holliston
Begley, James Edward Woburn
Belanger, Emile Jean Nashua, N. H.
Bennett, Harold Jones Monson
Bergan, Francis Patrick North Cohasset
Berger, Albert Conrad
van den Besselaar, Hubert Boston
Bianchi, Anthony Ferdinand Somerville
Billingham, Oscar Warren Jamaica Plain
Bodin, Leroy George Northampton
Brown, Frederic Ward
Brown, Henry Abraham
Browning, Frank Duane
Brush, David Carey Vineyard Haven
Bucknam, Earle Shepard Lewiston, Me.
Burke, Marcus Francis
Burke, Mark Manuel
Burke, William Edward Westfield
Burnce, Rachel Minnie Boston
Burns, Bernard John
Burns, Leo Edward Natick
Callahan, Henry Francis Peabody
Campbell, Charles Edward Peabody
Cassidy, Donald William
Chisholm, Walter King West Bridgewater

Church, Dana Earle Springfield
Clancy, William Henry
Clark, Ralph Arra Arlington
Clarke, George Francis Lowell
Cohen, Jacob
Cohen, Samuel
Cohen, Samuel
Cohen, Simon Isador Chelsea
Collins, William Henry Bondsville
Consolmagno, Luke Joseph Medford
Cooper, Benedict Brooklyn, N. Y.
Coughlan, Alphonsus John St. John, N. B. A.B. (St. Joseph's Univ.)
Crawford, Fred Brown Newport, Vt.
Croisetiere, Leo Albert New Bedford
Crossland, Ernest Agur
Crowl, Loyal J Boston
Crowley, Harold Francis Biddeford, Me.
Crowley, John Walter Dorchester
Cunningham, Richard Daniel Chicopee Falls
Cupitt, Graham Hunter
Cushing, Ralph William Portland, Me.
Cushner, Jacob Aaron Boston
Dacey, Arthur Joseph Marlboro
Dalton, Peter Joseph
DeFelice Michelangelo Boston
Demers, Romeo Felix
Des Marais, Alfred George Somersworth, N. H.
Desmond, John Walter Shirley
Dickson, Robert Earl West Somerville
Doherty, Thomas Augustine Lynn
Dufort, Gerald Eugene Manchester, N. H.
Duke, Robert Josiah Northfield, Vt.
Eaton, Dean Colton Brunswick, Me.
Edwards, Arthur Francis Salem
Egan, John Joseph O'Neil Dorchester
Ellis, John Henry Peabody
Emmons, Harry Elmer, Jr Brunswick, Me.
Epstein, Louis New Bedford
Fairbanks, Ivan Dean South Norwalk, Conn.
Farrell, Charles Laurence West Newton
Fernald, Orrin Edgar Dover, N. H.
Fierstein, Robert

Flanders, Charles Chase Malden
Foley, William Fergus
Frechette, Emile August Worcester
Freedman, Abraham
Frizzell, Walter Miller Greenfield
Garvey, Arthur Russell Waltham
Gaudet, Leo Andrew St. Joseph, N. B.
Gendreau, Raymond Dracut Center
German, George Henry
Ginn, James Richard West Harwich
Goldsmith, William Erwin Newburyport
Goodman, Morris
Grady, Fred Blessington
Green, Charles Harrison
Grimes, James Harvey
Grinnell, Willis Howland Waltham
Grotsky, Meyer
Hackett, John Henry Biddeford, Me.
Haffner, Ruth Clarissa Lawrence
Hagerty, Daniel Joseph Nashua, N. H.
Hagerty, John Francis, Jr Nashua, N. H.
Hall, James Paul
Harmer, Milton Ivan Norton, N. B.
Harris, Caspar East Boston
Harris, Max Jacob Dorchester
Harty, William Francis, Jr Gloucester
Harvey, Charles Edward Boston
Heath, William Brewster
Hickie, William Andrew St. George, N. B.
Isherwood, Sidney
Jacobs, Max Henry Boston
Jones, Solomon Jacob
Kefferstein, John Lawrence
Kelleher, John Alexander, Jr Marlboro
Kelleher, Joseph Jeremiah Brockton
Kelley, Francis Xavier
King, Thomas Henry Newton Highlands
Klein, Max Mitchell
Lambert, James Joseph
LaRochelle, Arthur Isidore Southbridge
LeBlanc, Arthur Hilarion
Lemont, Mason Metcalf Bath, Me.
Levin, Israel
Lievin, Island

Levin, Nathan Simmon Salem	
Levitan, Julius Joseph South Boston	
Lima, Frank William Lynn	
Little, Albert Wentworth Caribou, Me.	
Lounsbury, Paul, Jr Roslindale	
Lynch, Ambrose Henry Providence, R. I.	
Mackay, Edgar Forrester Belmont	
Margolis, David Henry	
Maycock, James Herbert	
McAuliffe, Philip Leo Wakefield	
McClure, Nathan Francis Atlantic	
McCormick, John James Springfield	
McGrath, James Harold	
McInnis, Joseph Ambrose	
McKenna, Ernest James Dorchester	
McKenna, Paul Joseph Dorchester	
McLellan, William Leonard Kensington, P. E. I.	
McNary, Ralph Henry	
Michelson, Myer Warren	
Mitchell, William Brewster Gould, Jr Hull	
Moberg, Frank Walter	
Morrill, Everett Elverdo	
Morrison, William Edward Everett	
Moskow, Rose Dorchester	
Mulcahy, Raymond Francis West Springfield	
Murphy, Frank Hill	
Murray, Charles Henry Worcester	
Neumann, Erna Elisabeth Bremen, Germany	
Norton, Thomas Augustus	
Norton, Thomas Keene Lexington	
Nulty, Thomas Edmund	
O'Connor, John Francis Fitchburg	
O'Gorman, Frederick Patrick South Manchester, Conn	
O'Hara, Thomas Edward	ι.
O'Hear, Francis Xavier	
O'Neill, Harry Martin	
Parsons, Fred Anthony	
Pennine, Saverio Nicandro	
Perelman, Joseph Max Burlington, Vt.	
Phipps, Walter Emerson	
Podolinsky, Solomon Benjamin	
Pofcher, Joseph	

Powers, James Harold Peabody
Powers, Richard Patrick
Reardon, Timothy Henry, Jr Lowell
Reed, Leonard Harold Keswick Ridge, N. B.
Richards, Clifton Stephen
Robertson, George Waldo North Abington
Rosenberg, Edward
Rosenblum, David Samuel
Ross, Samuel
Ross, Stanley Huggins
Rothblatt, George Willimantic, Conn.
Rourke, Arthur Thomas Fitchburg
Rubin, Joseph Boston
Ryan, John Thomas Avon
Sagansky, Harry Boston
Sager, Louis Emmons Roslindale
Saklad, Samuel Roxbury
Savage, Gale Russell Fitchburg
Schore, Herman Brooklyn, N. Y
Schwartz, Bernard Samuel Boston
Schwartz, Hyman Boston
Scott, Bessie Bonker
Shapiro, Harry Lawrence
Sheehan, Albert Thomas Wallingford, Conn.
Sheldon, Robert Francis
Shubow, Abraham Sidney Dorchester
Siskind, Berthold Lawrence
Snell, John Philip West Lynn
Stevens, Roland Silas Monhegan, Me.
Stewart, Roy Bryson Faneuil
Stokes, Samuel Hartley
Straw, Merle David Guilford, Me.
Sullivan, Frederick Devlin Sherburne Falls
Sullivan, Louis Edmund Maynard
Tetlow, Allen Redfern
Teutonico, Arthur Iginio Lawrence
Thomas, Kenneth Joshua Calias, Me.
Threshie, Charles
Trundy, Levi Searsport, Me.
Voge, William Louis Jamaica Plain
Walker, Edward Shipley
Walsh, Edward Thomas
Walsh, Lewis Edward Everett

Weener, Joseph
Wein, Theodore
Weisman, Frank Arlington
Welch, Francis Joseph Calais, Me.
Wescott, Oliver Dunbar Malden
Weymouth, Charles Haines, Jr Fisherville
Whittemore, Forrest James
Wholey, Timothy Joseph Lawrence
Whoriskey, George Richard
Williamson, Kenneth Gillmor Second Falls, N. B.
Wills, Albert Cornelius
Woods, Edward Patrick Newburyport
Woodworth, Randall Nelson, Jr Concord Junction
Yando, Arthur Heli Fitchburg
Zimmerman, Harold Springfield

## First Year

(To graduate in June, 1919)

Abbott, George Isaac . . . . . . . . . . . . Bethel, Vt.

,
Abramovitz, Max Revere
Adams, Warren Lincoln Somerville
Algar, Philip
Altman, Sidney Benjamin
Anderson, Charles Rangnar East Longmeadow
Andrews, Earle Gloucester
Archambeault, Arthur New Bedford
Barry, Jeremiah Francis
Barry, John Francis South Manchester, Conn.
Bates, Carl Jewell Winthrop, Me.
Baxter, Charles Francis Waterville, Me.
Bernot, Ruth Florida
Bethell, Russell Howard Norway, Me.
Bilsky, Philip Harry Southwick
Bishop, Floyd Beecher Presque Isle, Me.
Blackey, John Harold
Boire, Paul, Jr
Bommer, Armo Max
Bonney, Dorothy Geierstein Arlington
Boyaner, Frank St. John, N. B.
Brodbine, John Alfred Beachmont
Brooks, Frederick Bynum
Brown, Emery Hartley Presque Isle, Me.

Bulfinch, Fred Lawrence							. Manchester, N. H.
Bunnell, Shirley Abel		٠			۰		. Wales, Me.
Butler, Percival Forbes				۰			. Bath, Me.
Byrnes, John Joseph							. Holyoke
Cahill, Francis Michael	,						. Worcester
Callahan, John Francis .							. Provincetown
Carmody, Thomas George .							
Caron, Milio Valmor			٠				. Lewiston, Me
Casper, Michael Vincent							
Cassidy, Francis Leo							. Millbury
Clancy, James Fred							. Marlboro
Cleary, John Albert							
Cleary, William Francis		٠		,		,	. Roxbury
Cohen, Abraham Benjamin							
Coleman, Alfred Michell							
Collette, Albana Hugo		,					. Spencer
Comeau, Edmour Louis							
Congdon, James Leonard .							
Connor, Frank John							A
Cooper, Joseph Fenimore .							
Courant, Reginald							. Gloucester
Crowley, Joseph Henry	Ċ						. Brighton
Cummings, Lawrence Henry							
Curran, James Leo							
Dahl, Joseph Optimus							
Daitch, Abraham							
Davis, Russell Henry							
Deane, Edward Thornton .							
Desjardins, Louis Philip							
Diamond, Robert Ira							
Dion, Alfred Joseph							
Doane, Erling Eugene Donahoe, Frederic Florence							
Donahue, George Holland .							
Donahue, William Frederick							
Donlon, Carl James							
Donovan, Edward Harold .							
Dowd, Thomas Francis							
Doyle, Thomas Owen							
Dreicorn, Richard Edward .							
Dudley, Harry Orville, Jr							
Dunn, Frank Henry							
Egger, Eldon Fearing		4			0		. Brockton

Eldridge, Arthur Burnside
Emery, Norman Bartlett York Beach, Me.
Enholm, Philip Andrew Newton Lower Fall.
Erlenbach, Franklin Michael, Jr Brookline
Everett, Raymond Charles Waltham
Fallon, Paul Owen Roxbury
Fenton, Joseph William Lawrence
Fenton, Maurice John Springfield
Fine, Harry Israel Boston
Finnegan, John Patrick Brockton
Fishman, Leopold
Fitzgerald, Edmund John
Foss, Willard Harold Leominster
Franchere, Harry Birch North Adams
Freelander, Jacob Dewey Worcester
Friedman, Reuben Boston
Garland, Gordon E Nashua, N. H.
Genn, Benjamin Harris Pittsfield
Gibson, Burton Michaux Boston
Gideon, Jessie Katharine Boston
Ginsberg, Harold Springfield
Ginsberg, Joseph Springfield
Gleitsman, Adolphus Richard Somerville
Golden, Edward Warren East Boston
Goldstein, Moses
Gough, Martin George Everett
Grady, John Joseph Salem
Grady, Walter Joseph Worcester
Graichen, Walter Gustave Lawrence
Gregg, James Aloysius Natick
Gregoire, Ulric Leopold New Bedford
Gregory, Edward New Bedford
Grenache, Thomas Emil
Hannigan, Timothy William, Jr
Hannon, John Francis
Hare, Benjamin Springfiela
Harris, Maurice Coleman Lawrence
Healey, William Leo
Healy, Frank William New Bedford
Hobbs, Edward Stanley, Jr Stony Brook
Hodges, Kenneth Bertrand North Attleboro
Holland, Charles Leo South Boston
Hookway, Harold Henry Dorchester

Horrigan, Howard Patrick Holyoke
Hughes, Wilbur Robert Somerville
Hunter, James Stanley Natick
Jacobs, Isidore
Jennings, Cliford Milton Beach Park, Conn.
Just, José
Kalander, William Eugene Roxbury
Kalin, Harry Hyman Leominster
Kandib, Sophia Dorchester
Karamallis, Seraphim Theoharis Boston D.D. (Constantinople Theological College)
Kassels, Harry Isaac
Keane, Edward Francis Manchester, N. H.
Kelley, Robert Emmet
Kempton, Carl Fletcher Rangeley, Me.
Kestenbaum, Edward New Bedford
King, Frank Robinson Winnepeg, Manitoba
Kovàî, George South Boston
Laird, Henry Sperry Montpelier, Vt.
Lanagan, Arthur Gregory Waltham
Lane, Robert Joseph Wakefield
Lantz, Carl Aldolph Alvin Websterville, Vt.
Lasker, Reuben
Leary, William Joseph North Attleboro
LeBourdais, Joseph Thomas Brunswick, Me.
Levenson, Louis Charles Dorchester
Levine, Leo Israel
Levy, Clayman Carl Lynn
Lightman, Percy Lowell
Lipkind, Joshua Samuel · · Somerville
Lloyd, Frederick Alton Somerville
Looney, Daniel Edward East Weymouth
Lowell, Grace Evelyn Wilmington
Lynch, Joseph Francis
Macauley, Forrest Edward Gloucester
MacBride, Charles Clarke
Machanic, Morris Robert
Mackintosh, Robert Murdoch Ludlow
Marrs, Francis Jerome Peabody
Martin, James Harold Worcester
McCabe, Frank James Waltham
McCarthy, John Henry Dorchester
McCarty, Frank Joseph

McCaul, Fred Leo
McCormick, Everett Harold
McCoy, John Martin
McDonald, Hugh Joseph Southboro
McGowan, Paul Clare Somerville
McLean, Frank Malcolm
Merrill, Asa Forrest Lynn
Miller, Eli
Moran, Augustine James
Morse, Robert Gleason Rutland, Vt.
Mulcahy, William Thomas
Murphy, Charles Gerard Wollaston
Murray, John Francis Dedham
Muzzey, Ivor Paine
Nackley, Najeeb
Nelson, George Edwin Worcester
Nevens, George Sanford
Nicholson, Benjamin Lawrence
Nikula, Frank Oscar Fitchburg
Norris, George Francis South Hampton
Nutter, Doris
O'Connor, Charles Francis Boston
Oliver, Alfred Joseph
O'Meara, Catherine Virginia Boston
O'Regan William Leo East Boston
Pallas, Herbert Allen
Patriquin, Forrest Douglas Newburyport
Perri, Nicholas Peter
Pines, Hyman
Pottle, Arthur Freeman Meredith, N. H.
Pratt, Adelbert Merton Nashua, N. H.
Pratt, Herbert Louis Nashua, N. H.
Reed, Ralph Maltry Portsmouth, N. H.
Reid, Thomas Joseph, A.B. (Boston College). East Weymouth
Reid, William Francis Cambridge
Reines, Harold Bear
Ring, Frank Edward Lynn
Roberts, Russell Fair Haven, Vt.
Ronan, Helen Elizabeth
Rouslin, John Jacob
Sanders, Allbert Carter, Jr
Saunders, Earl Augustus Deer Isle, Me,
Scanlon, Thomas Michael Fitchburg
ocumon, Thomas Mitchael

Schwartz, Samuel Irving
Scott, Frank Joseph
Selinsky, Joseph Augustus
Sessler, Albert Rank Jamaica Plain
Sewell, Allan Neill Gibson, N. B.
Shea, John Ignatius, A.B. (Boston College) . Jamaica Plain
Shea, Matthew Francis
Sherman, Max West Somerville
Sherrard, Vernon Frederick Presque Isle, Me.
Sherter, Leon Charles Boston
Silvia, Joseph Azovido Fall River
Skofield, Raymond Harold Houlton, Me.
Smith, Howard Carlton Providence, R. I.
Smith, Maynard Maxwell Milltown, Me.
Spear, Harold Elmer St. Albans, Vt.
Spencer, Bradford Jenckes South Manchester, Conn.
Stephenson, Milton Cabot Belfast, Me.
Sterling, Harry Boston
Sterling, Louis
Stewart, Charles Edward Ft. William, Ont.
Stockwell, Roy George North Adams
Sullivan, George Thomas Dorchester
Sundstrom, George Leroy Worcester
Surabian, Mihran Charles Roxbury
Tasse, Joseph René Worcester
Taylor, Bernard Henry Springfield, Vt.
Thresher, Irene Celeste Southbridge
Thurman, Anna Dorchester
Titus, Paul King West Medford
Tomasi, Thomas
Toupin, Charles Henri Lowell
Turner, Charles Hamilton
Vasiliou, Stephen Theodore Boston
Walsh, James Edward, Jr
Wark, Roy Henry
Warren, Ralph Duncan Bath, Me.
Weeks, Cornelius
Weeks, Hadley Fairfield Calais, Me.
Weiner, Max
Westhaver, Ellerd Hunt Atlantic
White, Joseph Spencer Somerville
Wilder, Herbert Whiton
Wood, Leland Charles St. Albans, Vt,

Wright, Herbert 1	ra	ınc	cis					. North Attleboro
Wright, Ida Ellen								. Natick
Zirlstein, Israel .								Quincy
Zwoden, Abram								. Providence, R. 1

## Post-Graduate

Brown, William Foster, D.M.D. (Tufts College) Boston

## SUMMARY

Trustees	20
CORPS OF INSTRUCTION	
Emeriti	,
President and Professors	
Associate Professors	
Assistant Professors	
T .	
Instructors	
Demonstrators	
Assistants	
Teaching Fellows	
Total engaged in work of instruction	<b>- 27</b> 9
Other Officers, not previously counted	39
	318
0.0000.0000.000	===
STUDENTS	
SCHOOL OF LIBERAL ARTS:	
Seniors	:
Juniors	,
Sophomores	
Freshmen	
Special	
** · · · · · · · · · · · · · · · · · ·	221
Jackson College for Women:	, 221
Seniors	
Juniors	
Sophomores	
Freshmen	j
Specials	
Unclassified	-115
Engineering School:	
Seniors	
Juniors	
Sophomores	
Freshmen	
	212
BROMFIELD-PEARSON SCHOOL	22
CRANE THEOLOGICAL SCHOOL	15
Graduate School	7
ONE-YEAR PRE-MEDICAL COURSE	155
MEDICAL SCHOOL:	
Fourth Year	
Third Year	,
Second Year	
First Year	
DENTAL SCHOOL:	4-)
First Year	-00
	<u>588</u>
Total registration of students	1744
Names appearing twice	7
Total number of students	
Total number of students	1737



# A Statement of the Requirements in the Subjects that may be counted for Admission to Tufts College

Elementary English.

Three units.

Requirements for 1917-1919

The study of English in school has two main objects: (1) command of correct and clear English, spoken and written; (2) ability to read with accuracy, intelligence and appreciation.

Grammar and Composition.

One and one-half units.

The first object requires instruction in grammar and composition. English grammar should ordinarily be reviewed in the secondary school; and correct spelling and grammatical accuracy should be rigorously exacted in connection with all written work during the four years. The principles of English composition governing punctuation, the use of words, sentences, and paragraphs should be thoroughly mastered; and practice in composition, oral as well as written, should extend throughout the secondary school period. Written exercises may well comprise letter-writing, narration, description, and easy exposition and argument. It is advisable that subjects for this work be taken from the student's personal experience, general knowledge, and studies other than English, as well as from his reading in literature. Finally, special instruction in language and composition should be accompanied by concerted effort of teachers in all branches to cultivate in the student the habit of using good English in his recitations and various exercises, whether oral or written.

Literature.

One and one-half units.

The second object is sought by means of two lists of books headed respectively *Reading* and *Study*, from which may be framed a progressive course in literature covering four years. In connection with both lists, the student should be trained in reading aloud and be encouraged to commit to memory some

of the more notable passages both in verse and in prose. As an aid to literary appreciation, he is further advised to acquaint himself with the most important facts in the lives of the authors whose works he reads and with their place in literary history.

# READING (A)

The aim of this course is to foster in the student the habit of intelligent reading and to develop a taste for good literature, by giving him a first-hand knowledge of some of its best specimens. He should read the books carefully, but his attention should not be so fixed upon details that he fails to appreciate the main purpose and charm of what he reads.

With a view to large freedom of choice, the books provided for reading are arranged in the following groups, from each of which at least two selections are to be made, except as otherwise provided under Group I:

Group I. Classics in Translation.—The Old Testament, comprising at least the chief narrative episodes in Genesis, Exodus, Joshua, Judges, Samuel, Kings, and Daniel, together with the books of Ruth and Esther; the Odyssey, with the omission, if desired, of Books I, II, III, IV, V, XV, XVI, XVII; the Iliad, with the omission, if desired, of Books XI, XIII, XIV, XV, XVII, XXI; the Aeneid. The Odyssey, Iliad, and Aeneid should be read in English translations of recognized literary excellence.

For any selection from this group a selection from any other group may be substituted.

Group II. Shakespeare.—Midsummer Night's Dream; Merchant of Venice; As you Like It; Twelfth Night; The Tempest; Romeo and Juliet; King John; Richard II; Richard III; Henry V; Coriolanus; Julius Cæsar\*; Macbeth\*; Hamlet\*.

Group III. *Prose Fiction*. Malory's Morte d'Arthur (about 100 pages); Bunyan's Pilgrim's Progress, Part I; Swift's Gulliver's Travels (voyages to Lilliput and to Brobdingnag); DeFoe's

<sup>\*</sup> If not chosen for study under (B).

Robinson Crusoe, Part I; Goldsmith's Vicar of Wakefield; Frances Burney's Evelina; Scott's Novels (any one); Jane Austen's Novels (any one); Maria Edgeworth's Castle Rackrent, or The Absentee; Dickens's Novels (any one); Thackeray's Novels (any one); George Eliot's Novels (any one); Mrs. Gaskell's Cranford; Kingsley's Westward Ho! or Hereward, the Wake; Reade's The Cloister and the Hearth; Blackmore's Lorna Doone; Hughes's Tom Brown's Schooldays; Stevenson's Treasure Island, or Kidnapped, or Master of Ballantrae; Cooper's Novels (any one); Poe's Selected Tales; Hawthorne's The House of the Seven Gables, or Twice-Told Tales, or Mosses from an Old Manse; a collection of Short Stories by various standard writers.

Group IV. Essays, Biography, etc.—Addison and Steele's The Sir Roger de Coverley Papers, or Selections from the Tatler and Spectator (about 200 pages); Boswell's Selections from the Life of Johnson (about 200 pages); Franklin's Autobiography; Irving's Sketch Book (about 200 pages), or Life of Goldsmith; Southey's Life of Nelson; Lamb's Essays of Elia (about 100 pages); Lockhart's Life of Scott (about 200 pages); Thackeray's Lectures on Swift, Addison, and Steele in the English Humourists; Macaulay's Lord Clive, Warren Hastings, Milton, Addison, Goldsmith, Frederic the Great, Madame d'Arblay (any one); Trevelyan's Life of Macaulay (about 200 pages); Ruskin's Sesame and Lilies, or Selections (about 150 pages); Dana's Two Years before the Mast; Selections from Lincoln, including at least the two Inaugurals, the Speeches in Independence Hall and at Gettysburg, the Last Public Address, and the Letter to Horace Greeley, together with a brief memoir or estimate; Parkman's The Oregon Trail; Thoreau's Walden; Lowell's Selected Essays (about 150 pages); Holmes's The Autocrat of the Breakfast Table; Stevenson's An Inland Voyage, and Travels with a Donkey; Huxley's Autobiography, and selections from Lay Sermons, including the addresses on Improving Natural Knowledge, A Liberal Education, and A Piece of Chalk; a collection of essays by Bacon, Lamb,

DeQuincey, Hazlitt, Emerson, and later writers; a collection of Letters by various standard writers.

Group V. Poetry. Palgrave's Golden Treasury (First Series), Books II and III, with special attention to Dryden, Collins, Gray, Cowper, and Burns; Palgrave's Golden Treasury (First Series), Book IV, with special attention to Wordsworth, Keats, and Shelley (If not chosen for study under B); Goldsmith's The Traveller, and the Deserted Village; Pope's The Rape of the Lock; a collection of English and Scottish Ballads, as, for example, some Robin Hood ballads, The Battle of Otterburn, King Estmere, Young Beichan, Bewick and Grahame, Sir Patrick Spens, and a selection from later ballads; Coleridge's The Ancient Mariner, Christabel, and Kubla Khan; Byron's Childe Harold, Canto III or IV, and The Prisoner of Chillon; Scott's The Lady of the Lake, or Marmion; Macaulay's The Lays of Ancient Rome, The Battle of Naseby, The Armada, Ivry; Tennyson's The Princess, or Gareth and Lynette, Lancelot and Elaine, and The Passing of Arthur; Browning's Cavalier Tunes, The Lost Leader, How They Brought the Good News from Ghent to Aix, Home Thoughts from Abroad, Home Thoughts from the Sea, Incident of the French Camp, Hervé Riel, Pheidippides, My Last Duchess, Up at a Villa-Down in the City, The Italian in England, The Patriot, The Pied Piper, "De Gustibus"—, Instans Tyrannus; Arnold's Sohrab and Rustum, and the Forsaken Merman; Selections from American Poetry, with special attention to Poe, Lowell, Longfellow, and Whittier.

# STUDY (B)

This part of the requirement is intended as a natural and logical continuation of the student's earlier reading, with greater stress laid upon form and style, the exact meaning of words and phrases, and the understanding of allusions. The books provided for study are arranged in four groups, from each of which one selection is to be made.

Group I. Drama.—Shakespeare's Julius Cæsar, Macbeth, Hamlet.

Group II. *Poetry*.—Milton's L'Allegro, Il Penseroso, and either Comus or Lycidas; Tennyson's The Coming of Arthur, The Holy Grail, and The Passing of Arthur; the selections from Wordsworth, Keats, and Shelley in Book IV of Palgrave's Golden Treasury (First Series).

Group III. *Oratory*.—Burke's Speech on Conciliation with America; Macaulay's Two Speeches on Copyright, and Lincoln's Speech at Cooper Union; Washington's Farewell Address, and Webster's First Bunker Hill Oration.

Group IV. *Essays*.—Carlyle's Essay on Burns, with a selection from Burns's Poems; Macaulay's life of Johnson; Emerson's Essay on Manners.

#### Examination.

However accurate in subject-matter, no paper will be considered satisfactory if seriously defective in punctuation, spelling, or other essentials of good usage.

The examination will be divided into two parts:

# 1. Grammar and Composition.

In grammar and composition, the candidate may be asked specific questions upon the practical essentials of these studies, such as the relation of the various parts of a sentence to one another, the construction of individual words in a sentence of reasonable difficulty, and those good usages of modern English, which one should know in distinction from current errors. The main test in composition will consist of one or more essays, developing a theme through several paragraphs; the subjects will be drawn from the books read, from the candidate's other studies, and from his personal knowledge and experience quite apart from reading. For this purpose the examiner will provide several subjects, perhaps eight or ten, from which the candidate may make his own selections. He will not be expected to write more than four hundred words per hour.

#### 2. Literature.

The examination in literature will include:

- (a) General questions designed to test such a knowledge and appreciation of literature as may be gained by fulfilling the requirements defined under Reading (A), above. The candidate will be required to submit a list of the books read in preparation for the examination, certified by the principal of the school in which he was prepared; but this list will not be made the basis of detailed questions.
- (b) A test on the books prescribed for study, which will consist of questions upon their content, form, and structure, and upon the meaning of such words, phrases, and allusions as may be necessary to an understanding of the works, and an appreciation of their salient qualities of style. General questions may also be asked concerning the lives of the authors, their other works, and the periods of literary history to which they belong.

# Elementary German.

Two units.

It is expected that the candidate will have studied the subject in a systematic course for two school years, each covering the equivalent of 120 sixty-minute periods, during which special attention will have been given to pronunciation and to writing from dictation, as well as to the use of clear and idiomatic English in translation.

The examination will consist of two parts:

- (a) The translation into German of easy English sentences, to test the candidate's knowledge of the following subjects: the declension of nouns, adjectives, and pronouns; the conjugation of weak and the more frequently recurring strong verbs; the prepositions and cases which they govern; the simpler uses of modal auxiliaries; the elementary rules of syntax and word order. Proficiency may also be tested by questions on these topics.
- (b) The translation at sight of easy German prose. It is believed that the requisite facility may be acquired by the reading

of from two to three hundred pages of easy German, with preference given to narrative style.

[The following list is made up from works suitable for reading in preparation for this examination; Anderson's Bilderbuch ohne Bilder; Arnold's Fritz auf Ferien; Baumbach's Schwiegersohn: Heyse's Hochzeit auf Capri; Storm's Immensee; Leander's Träumereien; Roth's Ein nordischer Held; Benedix, Der Prozess; Wilhelmi's Einer muss heiraten; Fulda's Das verlorene Paradies.]

In place of the examination in Elementary German a candidate may offer the examination of the College Entrance Examination Board in German A.

#### Intermediate German.

One unit.

It is expected that the candidate will have pursued, in addition to the work done in preparation for Elementary German, an additional year's work of 120 hours. He should thus have acquired the ability to translate with considerable facility ordinary prose, similar to that of the preparatory course, and to answer briefly in German questions asked in that language by the instructor. Oral practice and dictation should be continued in this third year and a somewhat thorough acquaintance obtained with the rules of syntax, particularly with the subjunctive and infinitive moods; attention should also be given to the simpler facts of word formation—roots, prefixes and suffixes.

The examination will consist of two parts:

- (a) The translation into German of a connected passage of simple English, paraphrased from some German text.
- (b) The translation at sight of passages of ordinary German prose. It is believed that the requisite facility may be acquired by reading in addition to the amount stated for Elementary German, about four hundred pages of narrative and dramatic prose and verse.

[The following list is made up from works suitable for reading in preparation for this examination: Ebner-Eschenbach's Freiherren von Gemperlein; Gerstäcker's Irrfahrten; Hoffmann's Historische Erzählungen; Meyer's Gustav Adolfs Page; Riehl's Burg Neideck und Fluch der Schönheit; Freitag's Aus dem Staat Friedrichs des Grossen, and die Journalisten; Schiller's Geisterseher, Neffe als Onkel, and Balladen; Scheffel's Trompeter von Säkkingen.]

In place of the examination in Intermediate German a candidate may offer the examination of the College Entrance Board in German B.

#### Advanced German.

One unit.

This examination is open to candidates who have had the equivalent of a four years' course, with an average of 120 full hour periods per year. At the end of this course the student should be able to read, after brief inspection, any (save technical) modern German literature, if free from unusual textual difficulties; to put into German a passage of simple English prose, or to write in that language a brief theme on some assigned topic within his range; and to answer in German questions relating to the lives and certain works of the authors studied.

The examination will consist of three parts:

- (a) The writing in German of a paragraph, original or translated.
- (b) The translation into English of extracts from at least three distinctively different authors. It is believed that the requisite facility may be acquired by reading in addition to the amount mentioned under Intermediate German, about five hundred pages of good literature in prose and verse.
- (c) An oral test of proficiency in hearing and pronouncing German.

[The following list is made up from works suitable for reading in preparation for this examination: Fouque's Undine; Scheffel's Ekkehard; Ludwig's Zwischen Himmel und Erde; Freytag's Soll und Haben; Hauff's Lichtenstein; Goethe's Dichtung und Wahrheit (extracts), Die neue Melusine, Hermann und Dorothea; Lessing's Minna von Barnhelm, Schiller's Wilhelm Tell, Jungfrau von Orleans, Geschichte des dreissig-jährigen Krieges (third book); Grillparzer's Sappho; Kleist's Prinz von Homburg; Fulda's Talisman.]

In place of the examination in Advanced German, a candidate may offer the examination of the College Entrance Examination Board in German BC.

# Elementary French.

Two units

It is expected that the candidate will have studied the subject in a systematic course for two school years, each covering the equivalent of 120 sixty-minute periods, during which special attention will have been given to pronunciation and to writing from dictation, as well as to the use of clear, idiomatic English in translation.

The examination will consist of two parts:

- (a) The translation into French of easy English sentences to test the candidate's knowledge of the following subjects: the conjugation of the regular and the most frequently recurring irregular verbs; the forms and positions of personal pronouns; the uses of the other pronouns and of possessive, demonstrative, and interrogative adjectives; the variation of nouns and adjectives for gender and number (except rare cases); the partitive construction. Proficiency may also be tested by questions on these topics.
  - (b) The translation at sight of a passage of easy French. It is believed that the requisite facility may be acquired by the reading of not less than three hundred and fifty pages of simple prose, with preference given to narrative.

[The following list is made up from works suitable for reading in preparation for this examination: The easier stories of Daudet, Verne, and Erckmann-Chatrian; Foa's Le petit Robinson and Contes Biographiques; Enault's Le Chien du Capitaine; Malot's Sans Famille; About's Le Roi des Montagnes; Labiche and Martin's La Poudre aux Yeux and Le Voyage de M. Perrichon; Sarcey's Le Siège de Paris.]

In place of the examination in Elementary French a candidate may offer the examination of the College Entrance Examination Board in French A.

# Intermediate French.

One unit

It is expected that the candidate will have passed, in addition to the work done in preparation for Elementary French, an additional year's work of 120 hours. He should thus have acquired the ability to translate with facility ordinary prose or verse similar to that of the preparatory course, and to answer briefly

in French questions asked in that language by the instructor. Oral practice and dictation should therefore be continued in this third year, together with a more detailed study of syntax, particularly of the use of moods and tenses, and of word formation and common idiomatic phrases.

The examination will consist of two parts:

- (a) The translation into French of a connected passage of simple English.
- (b) The translation at sight of passages of ordinary French prose or dramatic verse. It is believed that the requisite facility may be acquired by reading, in addition to the amount required for Elementary French, not less than four hundred pages of prose and verse, preference still being given to narrative form.

[The following list is made up from works suitable for reading in preparation for this examination: About's stories; Daudet's La Belle-Nivernaise; La Brète's Mon Oncle et mon Curé; Loti's Pêcheur d'Islande; George Sand's Les Maîtres Mosaïstes; Mérimée's Colomba; Thierry's Récits des Temps mérovingiens; Thiers's L'Expédition de Bonaparte en Egypte; Vigny's La Canne de Jonc; Corneille's Horace; Molière's L'Avare and Le Bourgeois Gentilhomme; Racine's Athalie; Augier and Sandeau's Le Gendre de M. Poirier; Coppée's poems.]

In place of the examination in Intermediate French a candidate may offer the examination of the College Entrance Examination Board in French B.

# Advanced French.

One unit.

This examination is open to candidates who have had the equivalent of a four year's course, with an average of 120 full hour periods per year. At the end of this course the student should be able to read at sight, with the help of a vocabulary of special or technical expressions, difficult French of not earlier than the seventeenth century; to write in French a short essay on some simple subject connected with the works read in preparation, and to take part in a simple conversation in French.

The examination will consist of three parts:

(a) The writing in French of an original passage of at least 150 words on some assigned subject.

- (b) The translation into English of extracts from at least three distinctly different authors. It is believed that the requisite facility may be acquired by reading, in addition to the amount mentioned under Intermediate French, from six hundred to one thousand pages of standard French, inclusive of works merely commented upon in class.
- (c) An oral test of proficiency in hearing and pronouncing French.

[The following list is made up from works suitable for reading in preparation for this examination: Taine's Origines de la France contemporaine; Sainte-Beuve's Causeries du Lundi (Holt Ed.); Voltaire's Prose (Heath Ed.); Balzac's La Recherche de l'Absolu; Dumas' Les trois Mousquetaires (Ginn Ed.); Pelissier's Anthologie des Prosateurs français contemporains (Paris, Delagrave Ed.); Racine's Andromaque, Britannicus, Athalie; Corneille's Cinna and Polyeucte; Molière's Les Précieuses Ridicules; Beaumarchais' Mariage de Figaro; Hugo's Hernani and Ruy Blas.]

In place of the above, a candidate may offer the examination of the College Entrance Examination Board in French BC.

# Elementary Latin.

Two units.

The Latin reading shall be not less in amount than Cæsar, Gallic War, I—IV, and should be selected by the schools from Cæsar (Gallic War and Civil War) and Nepos (Lives). Candidates will be examined in translation at sight of passages from the above authors, also in grammar and composition.

In place of the examination for two units in Elementary Latin a candidate may offer the following examination of the College Entrance Examination Board:

Latin, 3.

# Intermediate Latin.

One unit.

The Latin reading, without the prescription of particular authors and works, shall be not less in amount than Cæsar, Gallic War, I—IV, and Cicero, the orations against Catiline, for the Manilian Law, and for Archias; this reading should be selected from Cæsar (Gallic War and Civil War) and Nepos (Lives), Cicero (orations, letters, and De Senectute) and Sallust (Catiline and Jugurthine War).

Candidates will be examined in translation at sight of passages from Cæsar and Cicero. The vocabulary, constructions, and range of ideas will be suited to the preparation secured by the reading indicated above. There will also be an examination on the following prescribed reading: Cicero, orations for the Manilian Law and for Archias.

Or the requirement in poetry, as defined under Advanced Latin, may be offered as optional in place of the third year prose.

The examinations in grammar and composition will demand thorough knowledge of all regular inflections, all common irregular forms, and the ordinary syntax and vocabulary of the prose authors read in school, with ability to use this knowledge in writing simple Latin prose. The words, constructions, and range of ideas called for in the examination in composition will be such as are common in the reading of the years covered by the examination.

In place of the examination for three units in Intermediate Latin a candidate may offer the following examinations of the College Entrance Examination Board:

Latin, 1, 2, and 4, or 1, 2 and 4 combined.

# Advanced Latin.

One unit.

- I. Amount and Range of the Reading Required
- 1. The Latin reading, without regard to the prescription of particular authors and works, shall be not less in amount than Cæsar, Gallic War, I—IV; Cicero, the orations against Catiline, for the Manilian Law, and for Archias; Vergil, Æneid, I—VI.
- 2. The amount of reading specified above shall be selected by the schools from the following authors and works: Cæsar (Gallic War and Civil War) and Nepos (Lives); Cicero (orations, letters, and De Senectute) and Sallust (Catiline and Jugurthine War); Vergil (Bucolics, Georgics, and Æneid) and Ovid (Metamorphoses, Fasti, and Tristia).

# II. SUBJECTS AND SCOPE OF THE EXAMINATIONS

1. Translation at sight. Candidates will be examined in translation at sight of both prose and verse. The vocabulary,

constructions, and range of ideas of the passages set will be suited to the preparation secured by the reading indicated above.

- 2. Prescribed Reading. Candidates will be examined also upon the following prescribed reading: Cicero, orations for the Manilian Law and for Archias, and Vergil, Æneid, I, II, and either IV or VI at the option of the candidate, with questions on subject-matter, literary and historical allusions, and prosody. Every paper in which passages from the prescribed reading are set for translation will contain also one or more passages for translation at sight; and candidates must deal satisfactorily with both these parts of the paper, or they will not be given credit for either part.
- 3. Grammar and Composition. See statement under Intermediate Latin.

In place of the examination for four units in Latin a candidate may offer the following examinations of the College Entrance Examination Board:

Latin, 1, 2, 4, and 5, or 1, 2 and 4 combined, and 5.

# SUGGESTIONS CONCERNING PREPARATION

Exercises in translation at sight should begin in school with the first lessons in which Latin sentences of any length occur, and should continue throughout the course with sufficient frequency to insure correct methods of work on the part of the student. From the outset particular attention should be given to developing the ability to take in the meaning of each word—and so, gradually, of the whole sentence—just as it stands; the sentence should be read and understood in the order of the original, with full appreciation of the force of each word as it comes, so far as this can be known or inferred from that which has preceded and from the form and the position of the word itself. The habit of reading in this way should be encouraged and cultivated as the best preparation for all the translating that the student has to do. No translation, however, should be a mechanical metaphrase. Nor should it be a mere loose

paraphrase. The full meaning of the passage to be translated, gathered in the way described above, should finally be expressed in clear and natural English.

A written examination cannot test the ear or tongue, but proper instruction in any language will necessarily include the training of both. The school work in Latin, therefore, should include much reading aloud, writing from dictation, and translation from the teacher's reading. Learning suitable passages by heart is also very useful, and should be more practised.

The work in composition should give the student a better understanding of the Latin he is reading at the time, if it is prose, and greater facility in reading. It is desirable, however, that there should be systematic and regular work in composition during the time in which poetry is read as well; for this work the prose authors already studied should be used as models.

### Elementary Greek.

Two units.

The examination will be adapted to the proficiency of those who have studied Greek in a systematic course for two years. It will consist of two parts, which cannot be taken separately:

- (a) The translation at sight of passages of simple Attic prose.
- (b) An examination on Xenophon's Anabasis, directed to testing the candidate's mastery of the ordinary forms, constructions, and idioms of the language.

Before taking the elementary examination the candidate should have read, in addition to the usual grammar work, at least four books of Xenophon's Anabasis, or an equivalent.

In place of the examination in Elementary Greek a candidate may offer the following examinations of the College Entrance Examination Board.

Greek A i and ii, and B.

#### Advanced Greek.

One unit.

The examination will be adapted to the proficiency of those who have studied Greek in a systematic course for three years.

The two parts of the examination may be taken separately:

- (a) The translation at sight of an average passage of Homer; with questions on ordinary forms, constructions, and idioms, and on prosody.
- (b) The translation into Attic prose of a passage of connected English narrative. The passage set for translation will be based on some portion of the Greek prose works usually read in preparation for college.

Before taking the examination in Advanced Greek the candidate should have completed at least four books of Xenophon's Anabasis, or their equivalent in Attic prose, and six books of Homer's Iliad, or their equivalent in the Odyssey. It is recommended that Greek composition accompany all stages of the preparation, and that the pupil be practiced in reading Greek aloud from the beginning of the course.

In place of the examination in Advanced Greek a candidate may offer the following examinations of the College Entrance Examination Board.

Greek A i, B, C or CH, and F.

# Elementary History.

One unit.

One of the following:

1. The History of Greece and Rome. (a) The history of Greece to the death of Alexander, with due reference to Greek life, literature, and art, as treated in the histories of Botsford, Oman, West, or Myers. (b) The history of Rome to the accession of Commodus, with due reference to Roman literature and government. Such texts as those of Morey, Botsford, West, or Allen will indicate the character of the work desired.

While the periods indicated above will be accepted as satisfying the entrance requirements in ancient history, it is strongly recommended that the study of the history of Greece be continued to the conquest of Greece by Rome, and that the history of Rome be pursued to the fall of the Western Empire.

This does not necessarily imply any increase in the time devoted to Greek and Roman history.

- 2. The History of England. The history of England, with due reference to social and political development. The histories of Andrews, Larned, and Montgomery will indicate the character of the work expected.
- 3. The History and Government of the United States. Such texts as those of McLaughlin, Johnston, Channing, and Guitteau should be used.

It is recommended that all candidates for admission to the courses leading to the degree of A.B. or B.D. should offer Greek and Roman history.

The elementary requirement in history implies one year's work of not less than five periods a week. A note-book of not less than fifty written pages, based upon three hundred pages of collateral reading, must be presented at the time of examination. Equivalents for the subjects named above will be accepted, but candidates desiring to offer substitutes must give notice to the Secretary of the Faculty at least one month previous to the time set for the examination. Work in the text-book should be constantly accompanied by collateral reading. The attention of teachers is called to the Report of the Committee of Seven, published by the Macmillan Company, New York, under the title, "The Study of History in Schools," and to the "History Syllabus for Secondary Schools" published by Heath and Co., Boston.

In place of any one of the examinations described above a candidate may offer any one of the four examinations in History of the College Entrance Examination Board.

# Advanced History.

One of the following:

- r. The History of Greece and Rome, as described above, for those only who have offered English history or the history and government of the United States as primary subjects.
- 2. The History of England as described above, for those who have not offered English history as a primary subject.

3. The History and Government of the United States, for those who have not offered the History and Government of the United States as a primary subject.

Each of these subjects requires one year's study of not less than five recitation-periods a week. A note-book of not less than fifty written pages, based upon three hundred pages of collateral reading, must be presented at the time of the examination. Equivalents for the subjects outlined above will be accepted, upon due notice, as indicated above under Elementary History.

In place of any of the examinations in Advanced History a candidate may offer any one of the four examinations in History of the College Entrance Examination Board, provided that the subject so offered has not been accepted for the Elementary History requirement.

#### Mathematics.

A knowledge of the metric system, and ability to perform accurately the ordinary processes of arithmetic, are presumed.

A 1. Algebra to quadratics.

One unit

The four fundamental operations for rational algebraic expressions.

Factoring, determination of highest common factor and lowest common multiple by factoring.

Fractions, including complex fractions, and ratio proportion.

Linear equations, both numerical and literal, containing one or more unknown quantities.

Problems depending on linear equations.

Radicals, including the extraction of the square root of polynomials and of numbers.

Exponents, including the fractional negative.

A 2. Algebra. Quadratics and beyond. One unit.

Quadratic equations, both numerical and literal.

Simple cases of equations with one or more unknown quantities, that can be solved by the methods of linear or quadratic equations.

Problems depending on quadratic equations.

The binomial theorem for positive integral exponents.

The formulas for the nth term and the sum of the terms of arithmetical and geometric progressions, with applications.

c. Plane Geometry, including the usual theorems on straight lines, angles, rectilinear figures, circles, and regular polygons; similar triangles and proportion; construction; original exercises in demonstration; numerical problems in mensuration.

One unit.

B. Advanced Algebra: Permutations and combinations; complex numbers and the graphical representation of sums and differences; determinants including the use of minors, and the solution of linear simultaneous equations; solution of numerical equations of higher degree and so much of the theory of equations, with graphical methods, as is necessary for their treatment, including Descartes' rule of signs and Horner's method. Credit in Advanced Algebra is given only on examination.

One-half unit.

- D. Solid Geometry, including properties of straight lines and planes, dihedral and polyhedral angles; of projections, of polyhedrons, including prisms, pyramids, and the regular solids; of cylinders, cones, and spheres; of spherical triangles, and the measurement of surfaces and solids.

  One-half unit.
- F. Plane Trigonometry, including the definition and relations of the six trigonometrical functions as ratios, proof of important formulæ, solution of trigonometric equations of a simple character, theory of logarithms and use of tables, solution of right and oblique plane triangles.

  One-half unit.

In place of the examinations in Mathematics a candidate may offer the examinations of the College Entrance Examination Board as follows:

Math. A for A; Math. C for C; Math. B for B; Math. D for D; Math. F for F.

Physics.

One unit.

The unit in Physics consists of at least 120 periods of sixty ninutes each. Time spent in the laboratory shall be counted at one-half its face value. The course of instruction should

include: (1) The study of one standard text-book. (2) Individual laboratory work consisting of experiments requiring at least the time of 30 double periods. Each student should perform at least 30 experiments, so distributed as to cover as fully as possible the subject matter of the text-book.

In lieu of the presentation of the laboratory note-book, at the time of the examination, the candidate must present a certificate in the following form:

#### TEACHER'S CERTIFICATE

S	cho	ol
	19	
I certify that has person	onal	lly
performed and properly recorded in a suitable note-book		
experiments in the physical laboratory of the		
School, during the year		

The entire course has occupied time equal to ...... periods of 60 minutes each, of which ...... hours have been given to the laboratory work and ...... hours to lecture and recitation work.

Signed .....

Teacher of Physics.

The teacher may here enter the final grade of ..... per cent.

In place of the above, candidates may present the examination of the College Entrance Examination Board in Physics.

# Chemistry. One unit.

Preparation for this requirement presupposes a course in general inorganic chemistry (non-metals and metals) of not less than five periods a week for a year. The amount of class work should equal that in An Introduction to the Study of Chemistry, by Ira Remsen, and the experiments should be equivalent to those in Remsen's Laboratory Manual. Time spent in the laboratory shall be counted at one-half its face value. The experiments must be performed by the student, and a certified laboratory note-book must be presented at the time of the examination.

In place of the above, candidates may offer the examination of the College Entrance Examination Board in Chemistry.

# Biology, Botany and Zoology.

One unit each.

In Biology, Botany and Zoology the examiners give more weight to the character of the work and the development of scientific habits than to the time spent; but at least five periods a week for a year must be given to each subject presented, and of this at least a half should consist of laboratory work. Certified copies of laboratory note-books must be presented. The work should be in structural and physiological lines and should include a detailed study of at least ten types. While it is desirable that these types should represent the chief phyla of the plant and animal kingdoms, it is most important that through their study the student shall become familiar with the experimental or inductive method of work.

In place of the examinations in Biology, Botany and Zoology, candidates may offer the examinations in Biology, Botany and Zoology of the College Entrance Examination Board.

# Geology or Geography.

One unit.

- 1. Geology: Le Conte's Elements of Geology or a book of equivalent grade, including a similar account of evolutionary theory.
  - 2. Geography: Davis, or book of equivalent grade.

At least five periods a week for a year must have been given to the subject presented. There should have been some laboratory work and excursions. Certified copies of note-books of laboratory work and excursions must be presented.

In place of the examination in Geography, candidates may offer the examination in Geography of the College Entrance Examination Board.

# Freehand Drawing.

One unit or one-half unit.

Such a knowledge of the fundamental principles of perspective is required as shall enable the student to draw a simple geometric figure with or without the use of a model. Certified drawings from a systematic course must be submitted for approval and the student may be examined on all points in doubt.

In place of the above the candidate may offer the examination in drawing of the College Entrance Examination Board.

# Mechanical Drawing.\*

One uni

Accuracy and neatness in drawing is of the first importance, and no amount of work will make amends for neglect in these respects. The student must be familiar with the use of ordinary instruments, and able to solve geometrical problems with accuracy and rapidity. He must have an elementary knowledge of projection, intersection and development, and should a so be practiced in the drawing of the ellipse, the parabola, and the hyperbola. The suggested course is included in the first one hundred pages of Anthony's Elements of Mechanical Drawing. Certified drawings must be submitted for approval and the student may be examined on all points in doubt.

# Shopwork.\*

The following units are given for courses satisfactorily pursued in well organized and fully equipped manual training or technical high schools in which the broad foundations of manual and graphic culture are given. The elementary work in the several courses must be thoroughly covered, and no credit will be given for premature engineering work.

Joinery	One-half unit
Wood Turning and Elementary Pattern Making	One-half unit
Forging	One-half unit
Bench and Machine Metal Fitting	One-half unit

Details of the work required for preparation in the above courses may be obtained by application to the Department of Mechanic Arts.

# Elementary Economics.

One-half unit.

Preparation for Economics presupposes that the candidate has studied the subject in a systematic course of at least three periods a week for one full year. Credit in Economics will be given only on examination. The examination will be based

<sup>\*</sup>Not more than two units may be counted by any candidate in the subjects of Drawing and Shopwork.

upon such text-books as Bullock's or Seager's Introduction to the Study of Economics. A knowledge of civics and, particularly, modern industrial history is of great value in supplementing the study of economic theory.

#### Music.

Entrance credit in Music is given only on examination. Not more than one unit in Music may be counted by any candidate.

(A) MUSICAL APPRECIATION. One-half unit.

The examination will be adapted to the attainment of those who have had one year's systematic training, with three lessons a week, or its equivalent. The candidate is expected to have (1) a general knowledge of the principal musical forms—song, classic dance, fugue, sonata (all movements), symphony—and of their historical development; (2) a general knowledge of the lives and environment of at least ten composers, including Bach, Mozart, Beethoven, Schubert, Chopin, and five of the following: Purcell, Handel, Gluck, Haydn, Cherubini, Weber, Rossini, Glinka, Mendelssohn, Schumann, Wagner, Verdi; (3) familiarity with certain designated works, the list of which may be had on application to the Department of Music. In the examination on these works, the candidate will be expected to identify characteristic portions of the works set, when played in any key by the examiner; and to give intelligent information concerning the form and character of the works themselves. The test will not require ability to perform, nor to read from printed music.

# (B) HARMONY.

One-half unit.

The examination will be adapted to the proficiency of those who have had one year's systematic training, with three lessons a week, or its equivalent. The candidate should have acquired (1) the ability to harmonize, in four vocal parts, simple melodies of not fewer than eight measures, in soprano or in bass: these melodies will require a knowledge of triads and inversions, of diatonic seventh chords and inversions, in the major and minor modes; and of modulation, transient or complete, to nearly-

related keys; (2) analytical knowledge of ninth chords, all non-harmonic tones, and altered chords (including augmented chords). [Students are encouraged to apply this knowledge in their harmonization.]

It is urgently recommended that systematic ear-training (as to interval, melody, and chord) be a part of the preparation for this examination. Simple exercises in harmonization at the pianoforte are recommended. The student will be expected to have a full knowledge of the rudiments of music, scales, intervals, and staff-notation, including the terms and expression-marks in common use.

# (D) PIANOFORTE, OR (E) VOICE, OR (F) VIOLIN. One-half unit.

The examination in each of these subjects will consist of a test in theory, and a test in performance. The former will be conducted in writing, and will be adapted to the proficiency of those who have had one year's systematic training, with one lesson a week, or its equivalent. The candidate should have acquired:

A knowledge of the rudiments of music, scales, intervals, and staff-notation, including the terms and expression-marks in common use; the ability to analyze the harmony and form of hymn-tunes and simplest pieces for the pianoforte, involving triads and the dominant seventh chord and their inversions, passing tones, and modulation to nearly-related keys; the ability to harmonize, on paper, in four vocal parts, melodic fragments involving the use of triads and the dominant seventh chord and their inversions in major keys.

As a basis of the test in performance, the candidate is to furnish a detailed statement from the teacher, showing the course of instrumental or vocal study pursued.

In place of the above, candidates may offer the corresponding examination of the College Entrance Examination Board: Music A, B, and D or E or F.

# **EXAMINATIONS** OF THE COLLEGE ENTRANCE EXAMINATION BOARD

In June, 1917, the admission examinations of this College will be the examinations of the College Entrance Examination Board, of which Tufts College is a member. The examinations will be held during the week June 17–22, 1917, in Robinson Hall, Tufts College, Massachusetts.

All applications for examinations must be addressed to the Secretary of the College Entrance Examination Board, 431 West 117th Street, New York, N. Y., and must be made upon a blank form, to be obtained from the Secretary of the Board upon application.

If the application is received sufficiently early the examination fee will be \$5.00 for candidates examined in the United States and Canada, and \$15.00 for candidates examined outside of the United States and Canada. The fee should be remitted by postal order, express order, or draft on New York to the order of the College Entrance Examination Board.

The applications and fees of candidates who wish to be examined outside of the United States and Canada must reach the Secretary of the Board at least five weeks in advance of the first day of the examinations, that is, on or before Monday, May 14, 1917.

The applications and fees of candidates who wish to be examined in the United States at points west of the Mississippi River must be received at least three weeks in advance of the examinations, that is, on or before Monday, May 28, 1917.

The applications and fees of candidates who wish to be examined in the United States at points east of the Mississippi River, or on the Mississippi River, must be received at least two weeks in advance of the first day of the examinations, that is, on or before Monday, June 4, 1917.

When the candidate has failed to obtain the required blank form of application for examination the usual examination fee will be accepted if the fee arrives not latter than the specified date accompanied by a memorandum containing the name and address of the candidate, the examination centre at which he wishes to present himself, and a list of all the subjects in which he may have occasion to take the Board's examinations.

Applications received later than the dates named will be accepted when it is possible to arrange for the admission of the candidates concerned, but only upon payment of \$5.00 in addition to the usual fee.

A list of the places at which examinations are to be held by the Board in June, 1917, will be published about March 1. Requests that the examinations be held at particular points, to receive proper consideration, should be transmitted to the Secretary of the Board not later than February 1.

For the convenience of those who present the examinations of the College Entrance Examination Board, the following table of equivalents is presented:

TUFTS COLLEGE ENTRANCE SUBJECTS English 1 English 2 Elementary German Intermediate German Advanced German Elementary French Intermediate French Advanced French Elementary Latin Intermediate Latin Advanced Latin Elementary Greek Advanced Greek Elementary History Advanced History Mathematics Algebra AI Algebra A 2 Plane Geometry Advanced Algebra Solid Geometry Trigonometry Physics Chemistry Botany Zoology Biology Geology or Geography Freehand Drawing Mechanical Drawing Music B, D, E, F

COLLEGE ENTRANCE EXAMINATION BOARD EQUIVALENT English 1 English 2 German A German B German BC French A French B French BC Latin 3 Latin 1, 2 and 4, or 1, 2 and 4 combined Latin 1, 2, 4 and 5, or 1, 2 and 4 combined, and 5 Greek A i and ii B, and G Greek Ai, B, C or CH, F, and G History A, B, C, or D History A, B, C, or D Mathematics AI Mathematics A 2 Mathematics c Mathematics B Mathematics D Mathematics F **Physics** Chemistry Botany Zoology Biology

Geography Frehand Drawing

Mechanical Drawing

Music B, D, E, F

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# TUFTS COLLEGE VOL. XVIII BULLETIN NO. 2

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1917-1918

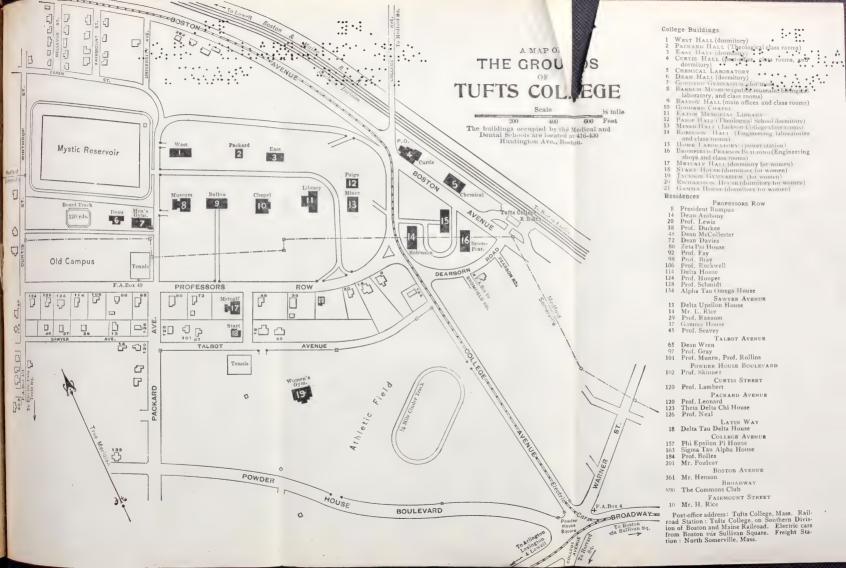
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The address of the Medical and Dentál Schools is 416-430 HUNTINGTON AVENUE, BOSTON, MASS.







TUFTS COLLEGE

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Tufts College Catalogue

# **CATALOGUE**

OF

# TUFTS COLLEGE

1917-1918



School of Liberal Arts
Jackson College for Women
Engineering School
Bromfield-Pearson School
Crane Theological School
Graduate School
Pre-Medical Course
Medical School
Dental School

The purpose of this publication is to give information to those who may desire to become students of Tufts College, and to provide a book of reference.

It is the policy of the College not to introduce changes in requirements for admission without due notice in the catalogue, and not to impose additional requirements upon classes already enrolled. Changes in the curriculum and in the program occasionally may be necessary, and under such circumstances equitable adjustment is made.

The Registrar will be glad to answer inquiries, and an invitation to visit the College is extended to those who may desire to do so.

# Tufts College

While the College owed its beginning to the efforts and to the support of members of the Universalist denomination, the charter provided that "No instructors in said College shall ever be required by the Trustees to profess any particular religious opinions as a test of office, and no student shall be refused admission to or denied any of the privileges, honors, or degrees of said college, on account of the religious opinions he may entertain."

Its purpose is to provide substantial instruction in fundamental subjects, and to encourage those who are eager to make use of its educational opportunities, in order that they may improve themselves and thus contribute to the general improvement of the community.

To this end the institution is using a large endowment and is enlisting the support of graduates and friends. The Faculty aims not only to teach, but to ascertain the intellectual deficiencies and proficiencies of the students, and through personal effort and sympathetic counsel to strengthen the places wherein they are weak, and to develop to the utmost the places wherein they are strong.

Tufts College does not desire to enlarge its enrollment with those who seek leisure, or who look lightly upon college work, but it will do its utmost to help those who come to it with the fixed purpose of profiting by what it can give.

#### LOCATION OF TUFTS COLLEGE

The Buildings and Grounds in Somerville and Medford

The original buildings are located on the hill formerly known as Walnut Hill in Somerville and Medford—adjoining the City of Boston—and about five miles from the State House. Several car lines run directly to the College Grounds. The campus embraces about eighty acres, and there are twenty buildings used for educational and dormitory purposes. The buildings and the grounds have an estimated value of \$1,335,000. Here

are located the School of Liberal Arts, Jackson College for Women, the Engineering School, the Bromfield-Pearson School, the Crane Theological School, and the Graduate School.

## The Buildings and Grounds in Boston

In 1893 the Tufts College Medical School was established, and in 1899 the Boston Dental College was taken over by legislative sanction. These professional schools are located in the Medical-Dental Buildings, 416 Huntington Ave., Boston, Mass. The land and buildings represent an investment of over \$300,000. There are 83,000 square feet of floor space divided into lecture rooms, laboratories, offices, etc.

The College has an interest in the Biological Laboratory at South Harpswell, Maine, which enables it to offer special privileges to officers and students.

The College is fortunate in its location. Student life at "The Hill" is substantially like that of the smaller colleges in New England. The students and Faculty form a community, the members of which are well acquainted with each other, and there are many social interests in which all share. A close intimacy between the Faculty and the student body has always prevailed.

The proximity of Boston makes it easy for students to avail themselves of the libraries, museums, and other social, educational, and cultural facilities that are offered by a large city. Students receive material benefit from the privileges offered by business houses, manufacturing plants, and other institutions.

The Medical-Dental Buildings are not far from the Library of the Boston Medical Association, are central to the larger hospitals, dispensaries, and clinics, and near a score or more of scientific and educational institutions.

Control of the College is vested by the charter in a Board of Trustees, ten of whom are elected by the Alumni. Immediate control of the educational work rests with the several Faculties.

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# PART I

# THE ASSOCIATED SCHOOLS

(Located at "The Hill")

SCHOOL OF LIBERAL ARTS (Giving the degrees of A.B. and B.S.)

JACKSON COLLEGE FOR WOMEN (Giving the degrees of A.B. and B.S.)

ENGINEERING SCHOOL (Giving the degree of B.S.)

BROMFIELD-PEARSON SCHOOL (One-year course. No degree)

CRANE THEOLOGICAL SCHOOL (Giving the degree of S.T.B.)

GRADUATE SCHOOL (Giving the degrees of A.M. and M.S.)

A Pre-Medical Course — providing instruction equivalent to two years of college work — is conducted at the Medical-Dental Buildings, which are located on Huntington Ave., Boston, but the instruction is given under the direction of the School of Liberal Arts.

# Calendar — 1918

_	JANUARY				MAY				SEPTEMBER											
	M	Т	w	T	F	S	s	M	T	w	T	F	s	s	M	T	w	Т	F	s
6 13 20 27	21	1 8 15 22 29	2 9 16 23 30	3 10 17 24 31	4 11 18 25	5 12 19 26	5 12 19 26	6 13 20 27	7 14 21 28	1 8 15 22 29	2 9 16 23 30	3 10 17 24 31	4 11 18 25	1 8 15 22 29	2 9 16 23 30	3 10 17 24	4 11 18 25	5 12 19 26	6 13 20 27	7 14 21 28
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		M.	AR	СН			JULY				NOVEMBER									
	18	19	6 13 20 27	7 14 21 28	1 8 15 22 29	2 9 16 23 30	7 14 21 28	1 8 15 22 29	16	17	4 11 18 25	10	20	110	18	5 12 19 26	20	21	22	23
APRIL			AUGUST				DECEMBER													
21		16		18		6 13 20 27	18	19	13 20	21	1 8 15 22	23	24	1 8 15 22	16	3 10 17 24 31	18	19	6 13 20 27	21

# Calendar of the Associated Schools

#### 1918

- JAN. 2. Christmas recess ends, Wednesday, 8 A.M. FEB. 7-13. Mid-year examinations.
- End of the first half-year, Wednesday. FEB. 13.
- 18. Second half-year begins, Monday. Registration. FEB. Washington's Birthday. Exercises are suspended. FEB. 22.
- Spring recess begins, Wednesday evening. APRIL 17.
- Spring recess ends, Monday, 8 A.M. APRIL 22.
- MAY ·IO. Goddard Prize Readings, Friday, 8 P.M. (Goddard Chapel).
- MAY 20. Senior Theses due at 10 A.M. (Engineering School).
- Senior Examinations. (Engineering School). MAY 25-29.
- 30. Memorial Day. Exercises are suspended. MAY
- JUNE 8-13. Final examinations.
- JUNE 16. Baccalaureate Sermon, Sunday, 4 P.M. (Goddard Chapel).
- JUNE 17. Annual Commencement, Monday.
- JUNE 17-22. Entrance Examinations conducted by the College Entrance Examination Board. Application blanks may be obtained from the Secretary of the Board, 431 West 117th St., New York, N. Y.
- SEPT. 16-18. Entrance examinations given in Ballou Hall, Tufts College, Mass. For the schedule see "Admission by Examination."
- SEPT. 26. College year begins. Registration.

OCT.

FEB.

- OCT. 12. Columbus Day. Exercises are suspended.
  - 20. Russell Lecture, Sunday, 4 P.M. (Goddard Chapel).
- Nov. 20. Announcement of Academic Honors, 12 M. (Goddard Chapel).
- Nov. 28. Thanksgiving Day. Exercises are suspended. DEC.
  - 21. Christmas recess begins, Saturday, I P.M.

#### 1919

- JAN. 2. Christmas recess ends, Thursday, 8 A.M.
- JAN. 31 to FEB. 5. Mid-year examinations. FEB.
  - 5. End of the first half-year, Wednesday.
  - Second half-year begins, Monday. IO.
- FEB Washington's Birthday. Exercises are suspended. 22.
- Spring recess begins, Wednesday, 5 P.M. APRIL 16. 21. Spring recess ends, Monday, 8 A.M. APRIL
- MAY 10. Goddard Prize Readings, Friday, 8 P.M. (Goddard Chapel).
- MAY 19. Senior Theses due at 10 A.M. (Engineering School).
- MAY 26-29. Senior Examinations. (Engineering School). MAY 30. Memorial Day. Exercises are suspended.
- JUNE 7-12. Final examinations.
- MUNE 15. Baccalaureate Sermon, Sunday, 4 P.M. (Goddard Chapel).
- UNE 16. Annual Commencement, Monday.

# Faculty of the Associated Schools

The post office address is Tufts College, Mass., unless otherwise indicated.

Pr	-	в	-5		_

HERMON CAREY	BUMPUS,	Рн.D., Sc.D.,	LL.D 8	Professors :	Ro
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#### Deans

- GARDNER CHACE ANTHONY, A.M., Sc.D. . . 14 Professors Row Engineering School
- LEE SULLIVAN McCOLLESTER, S.T.D. . . . 48 Professors Row Crane Theological School

# Chaplain

EDWIN CORTLANDT BOLLES, D.D., LL.D. . . . 184 College Ave.

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WILLIAM HOWELL REED, A.M. . . . . 81 Walnut Ave., Roxbury

### Professors Emeriti

- CHARLES HALL LEONARD, A.M., D.D., LL.D. . 120 Packard Ave.

  Goddard Professor of Homiletics and Pastoral Theology,
  and Dean of the Crane Theological School
- CHARLES DURLIN BRAY, C.E., A.M. . . . . . 98 Professors Row Mechanical Engineering
- GEORGE MILFORD HARMON, A.M., D.D. . . . . Rindge, N. H. Biblical Theology
- WILLIAM GEORGE TOUSEY, A.M., S.T.D. 79 Marshall St., Somerville

  Logic and Ethics

#### Professors

Arranged in the order of their appointment at Tufts.

CHARLES ERNEST FAY, A.M., LITT.D. . . . . . 92 Professors Row

Wade Professor of Modern Languages

Dean of the Graduate School

FACULTY . 15

WILLIAM LESLIE HOOPER, A.M., Ph.D., Sc.D., LL.D.  Electrical Engineering 124 Professors R	kow.
FRANK WILLIAMS DURKEE, A.M 38 Professors R  Chemistry	cow
LEO RICH LEWIS, A.M 20 Professors R  History and Theory of Music	low
GARDNER CHACE ANTHONY, A.M., Sc.D 14 Professors R  Technical Drawing Dean of the Engineering School and Bromfield-Pearson School	low
FRANK GEORGE WREN, A.M 65 Talbot A  Walker Professor of Mathematics  Dean of the School of Liberal Arts	ve.
CHARLES HARRIS CHASE, S.B 39 Lincoln St., Stoneh Steam Engineering	am
FRED DAYTON LAMBERT, A.M., PH.D 120 Curtis S  Botany W. Somervi	
WILLIAM KENDALL DENISON, A.M 42 Fletcher St., Winches  Latin Language and Literature	ster
HENRY CLAYTON METCALF, Ph.D 31 Sheffield Ro Jackson Professor of Political Science Winches	
EDWIN CORTLANDT BOLLES, A.M., Ph.D., D.D., LL.D.  Dickson Professor of English and American History 184 College A	
WILLIAM RICHARD RANSOM, A.M 29 Sawyer A  Mathematics	
FRANK BERRY SANBORN, C.E., M.S 8 Buena Vista Pa  Civil Engineering  N. Cambrid	
EDWARD HENRY ROCKWELL, S.B. 133 Powder House Bouleva Structural Engineering W. Somervi	
ALFRED CHURCH LANE, A.M., Ph.D., Sc.D 22 Arlington S  Pearson Professor of Geology and Mineralogy  N. Cambrid	
HENRY IRVING CUSHMAN, A.M., D.D 26 Pitman S Homiletics Providence, R.	. I.
CAROLINE STODDER DAVIES, A.M	ow
HINCKLEY GILBERT MITCHELL, D.D 36 Pinckney St., Bost  Hebrew and Old Testament Exegesis	on

ARTHUR IRVING ANDREWS, Ph.D. . . 405 Broadway, Cambridge

History and Public Law

KARL SCHMIDT, A.M., Ph.D. . . . . . . . . . 128 Professors Row

LEE SULLIVAN McCOLLESTER, S.T.D. . . . . 48 Professors Row

HERBERT VINCENT NEAL, PH.D. . . . . . . . . . 126 Packard Ave.

Philosophy and Education

Packard Professor of Christian Theology Dean of Crane Theological School

Zoology
CLARENCE RUSSELL SKINNER, A.M 102 Powder House Blvd.  Woodbridge Professor of Applied Christianity W. Somerville
CHARLES HENRY GRAY, Ph.D
HENRY HOWARD MARVIN, B.S., Ph.D 6 Marshall St.  Physics Medford Hillside
FRANK ELIAS SEAVEY, A.M * 45 Sawyer Ave English
Assistant Professors  Arranged in the order of their appointment at Tufts.  *EDWIN BUTLER ROLLINS, B.S
MELVILLE SMITH MUNRO, B.S 101 Talbot Ave Electrical Engineering
WILLIAM HOWELL REED, A.M 81 Walnut Ave., Roxbury  Modern Languages
RICHARD CURTIS SMITH, B.S 15 Warren St., W. Medford Structural Engineering
SAMUEL LUCAS CONNER, M.S 33 Emery St., Medford Hillside Railroad Engineering
HOWARD HASTINGS CARROLL, B.S 66 Wyman St., W. Medford Technical Drawing
ALBERT HATTON GILMER, A.M 154 Woburn St., W. Medford English
VANNEVAR BUSH, M.S., Eng.D 18 Tudor St., Chelsea Electrical Engineering
WILLIAM FRANK WYATT, Ph.D
JOSEPH CHANDLER, Ph.D 7 Edison Ave., Medford Hillside Organic Chemistry
* Absent on leave, first semester 1917 — 1918.

#### Lecturers

- REV. FRANCIS G. PEABODY, D.D., Russell Lecture, November 4, 1917 Cambridge
- Miss FLORENCE JACKSON . . . . . . . 264 Boylston St., Boston Four lectures on Vocations for Women

#### Instructors

- CONRAD ARNOLD ADAMS, B.S. . . . . 108 College Ave., Medford

  Mechanic Arts
- CROSBY FRED BAKER, M.S. . . . . . . . . . . . . . 75 Pearson Rd., W. Somerville

  Chemistry
- RUTH ALDEN BASS . . . . . . . . . . . Alpha House, Latin Way

  Physical Training in Jackson
- MARY STONE BRUCE, A.M. . . Hotel Cluny, 543 Boylston St., Boston French
- HARRY POOLE BURDEN, B.S. . . 34 W. Adams St., W. Somerville Civil Engineering
- THOMAS JOHN CONNOR . . . . . 18 Stevens St., Medford Hillside Director of Physical Training
- SHIRLEY WILCOX HARVEY, A.B. ..... Dean, 6

  English
- JOHN LOUIS CHARLES KEEGEN, A.M. . . . . . . . Dean, 10

  English
- NATHANIEL HOBBS KNIGHT, B.S. . . . 44 Stearns Ave., Medford Physics
- ARTHUR WHITING LEIGHTON . . . . 26 Gibbens St., Somerville Drawing
- EDGAR MACNAUGHTON, M.E. . . 88 Quincy St., Medford Hillside Mechanical Engineering
- CHARLES FREEMAN NEVENS, A.B. . 64 Ossipee Rd., W. Somerville

  Modern Languages in the Engineering School
- FRANK WALTER POTE, B.S. . . . . . . 45 Dearborn St., Medford Physics

AUGUSTE LAWRENCE POULEUR, M.S. . . . . 201 College Ave.,

HAROLD JAMES POWER, B.S. . . . 14 Warner St., W. Somerville

HARRIS RICE, S.B. . . . . . . . 211 Boston Ave., Medford Hillside

Walker Special Instructor in Mathematics

W. Somerville

Chemistry

Librarian

Radio-Engineering

LEPINE HALL RICE, Ph.B
EDWIN ADAMS SHAW, A.M 63 College Ave., W. Somervill Education
DONALD SKEELE TUCKER, A.M 429 Columbus Ave., Bosto Political Science
Assistants
MARGARET BOLLES
FORREST WILLARD COBB, '18 $\Delta$ T $\Delta$ House, 18 Latin Wa Chemistry
HELEN BEATRICE CROCKER, B.S 31 Sheffield Rd., Winchester Political Science
HARRY WALTER HIGHRITER, '18 . Z Ψ House, 80 Professors Ros Stock Room Clerk in Chemical Laboratory
GEORGE ROBERT CRONIN, '18 Φ Δ House, 20 Sunset Ro Chemistry
GENEVA ALICE WHEET, A.B 136 Curtis St., W. Somervill English
GEORGE FREEMAN WHITMARSH, '20 West, I Olmstead Scholar
MARY A. GRANT, '20 Delta House, 114 Professors Roy Olmstead Scholar
HELEN K. HARDY, '19 Delta House, 114 Professors Roy Olmstead Scholar
BERTRAM E. GREEN, '18 ΦΕΠ House, 157 College Ave Olmstead Scholar
Eaton Memorial Library
HELEN LOUISE MELLEN 58 Curtis St., W. Somerville Librarian, Emeritus

ETHEL MUNROE HAYES, A.B. . . . . 252 Medford St., Somerville

BLA	NCHE HEARD HOOPER, A.B 124 Professors Row Assistant Librarian
HEL	EN ALMIRA ROWE, A.B 20 Vine St., Winchester Cataloguer
CLA	RENCE HARVEY WOODWARD, '19 A T Ω House  Student Assistant 134 Professors Row
RAL	PH DEWEY WESTON, '20 West, 10 Student Assistant
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GEO	RGE STEWART MILLER, A.M 128 North St., Medford Hillside Secretary to the President
NEL	LIE ALVIRA WRIGHT 245 Medford St., Somerville  Registrar
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	Administrative Office of the Dean of Jackson College
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A	dministrative Office of the Dean of the Engineering School
MASO	ON EDWARD BENNETT 34 Martin St., Medford Hillside Clerk
Adm	inistrative Office of the Dean of the Crane Theological School
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	Foreman of the Grounds and Buildings
GEOF	RGE WISEMAN HENSON 391 Boston Ave.
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Mrs.	CAROLINE M. ROBINSON, A.B 56 Professors Row Head of Metcalf Hall
MISS :	RUTH ALDEN BASS Latin Way Alpha House

- MRS. DOROTHY CHAMBERLAIN . . . . . . . . . 28 Professors Row Richardson House

#### Medical Advisers

- JOHN ALLAN McLEAN, M.D. . . . . 16 Curtis St., W. Somerville

  Medical Adviser
- ANNA QUINCY CHURCHILL, M.D. . . 32 Percival St., Dorchester

  Medical Adviser

# Russell Lecturer, 1918

FRANCIS GREENWOOD PEABODY, D.D., LL.D. . . . Cambridge

# Standing Committees

ADMINISTRATION: President Bumpus, Chairman; DeansWren, Anthony, McCollester, Davies, and Fay; Professors Hooper and Lambert.

LIBRARY: President Bumpus, *Chairman*; Dean Fay, Professors Andrews, Chase, and Gray.

PROGRAM AND EXAMINATIONS: Dean Wren, Chairman; Dean Anthony and Professor Denison.

CATALOGUE: Dean Anthony, *Chairman*; Professors Denison and Seavey.

BOOKS AND SUPPLIES: Professor Lewis, *Chairman*; Professors Lane,
Conner, and Mr. Burden.

MEMBERS ON THE PART OF THE FACULTY OF ARTS AND SCIENCES OF THE BOARD OF DIRECTORS OF ATHLETICS: Professor Smith, *Chairman*; Mr. MacNaughton and Mr. Shaw.

STUDENT ORGANIZATIONS AND USE OF COLLEGE BUILDINGS: Professor Hooper, *Chairman*; Dean Anthony, Professors Denison, Smith, and Gilmer.

STUDENT EMPLOYMENT: Professor Gilmer, Chairman; Professor Rollins and Mr. H. Rice.

BOARD OF EDITORS OF TUFTS COLLEGE STUDIES: President Bumpus, Chairman; Professors Fay, Neal, Metcalf, and Rockwell.

NATIONAL SERVICE: Professor Hooper, Chairman; Professors Andrews and Lane, Dr. Chandler and Mr. Burden.

# Requirements for Admission

Candidates for admission to the School of Liberal Arts, Jackson College for Women, the Engineering School and the Crane Theological School must have received adequate preparation in certain subjects, aggregating fifteen units which fall in the groups mentioned below. In these groups the values of the several subjects are given in units. Each unit "represents a year's study in any subject in a secondary school, constituting approximately a quarter of a full year's work."

## 1. Prescribed Group

All of the	following, which aggregate.	٠,		. 8 units
	English 1		I ½	
	English 2		I 1/2	
	Foreign Language		24	
	History		ı‡	
	Algebra A1		1	
	Plane Geometry		I	

### 2. Elective Group

A sufficient number of the following to aggregate . . 4 units

Foreign Language	I, or 2, or	3, or 4†
History		I or 2‡
Algebra A2		I
Physics		1
Chemistry		1
Solid Geometry		1/2
Trigonometry		1/2
Freehand Drawing	-	1/2

# 3. Free Margin Group

This group may be made up of any subjects (not counted in the previous groups) which an approved secondary school counts toward graduation, and which are certified by the Principal to be equivalent to . . . . . . . . . . . . . . . . 3 units

Total 15 units

The foreign languages offered for admission are to be selected from the following: Latin, Greek, French, and German. In Latin, 2, 3, or 4 units may be counted, and in Greek, French, or German, either 2 or 3 units may be counted. Any other foreign language in which systematic instruction has been received for a period of at least two years may be counted for 2 units.

Candidates for the degree of Bachelor of Arts must present either 4 units in Latin or 3 in Greek.

Candidates for admission to the Engineering School must present 2 units in Algebra.

It is recommended that at least 9 of the units presented for admission be confined to three subjects.

Detailed information concerning the amount and character of the work demanded in preparation will be found in the Appendix.

#### METHODS OF ADMISSION

Admission to Tufts College may be obtained by certificate, by examination, or by a combination of the two. Every candidate for admission must present a testimonial of good character from the principal under whom he was prepared for college.

## Admission by Certificate

In order to make the transition from the school to the college more direct, Tufts College has an arrangement with certain high schools whereby students of good standing may pass from the high school directly into the College without the formality of examination. The conditions controlling this arrangement require that the school shall be on the approved list of the New England College Entrance Certificate Board, and that in certain subjects the pupil shall have completed with certificate grade the amount required for admission to the Freshman class of Tufts College.

The principals of the accredited schools are provided with blanks prepared for this purpose.

Certificates showing that candidates have fulfilled the admission requirements of another college or university will be accepted, in so far as they fulfill the conditions controlling admission to Tufts.

The academic diploma of the Regents of the State of New York will be accepted for admission when such diploma covers the subjects required for entrance.

The student should make sure that the certificate upon which he intends to enter Tufts College is sent to the Registrar (Tufts College, Mass.) at the earliest possible date — preferably at the time of graduation — and that he receives from the College an acknowledgment assuring him that the certificate has been received and that his name has been enrolled.

All schools in New England which desire the certificate privilege should apply to the Secretary of the Board, Professor Frank W. Nicolson, Wesleyan University, Middletown, Conn., before April 1 of the year for which the certificate privilege is desired.

Applications for the certificate privilege for schools outside of New England should be made by the Principal on a blank provided for the purpose by the Registrar of the College. Applications should be received before April 1, in order that the school may be placed upon the approved list for the next academic year.

### Admission by Examination

The examinations may be taken in June or in September, or a part in June and a part in September.

In June, 1918, the admission examinations of this College will be the examinations of the College Entrance Examination Board, of which Tufts College is a member. The examinations will be held during the week June 17–22, 1918, at Robinson Hall, Tufts College, Mass., and at other places to be announced by the Board.

For further information consult the Appendix or communicate with the Secretary of the College Entrance Examination Board, 431 West 117th Street, New York, N. Y.

The September examinations are prepared and given by Tufts College in accordance with the following schedule.

# September, 1918, Examinations for Admission to the Associated Schools

(These examinations will be given in Ballou Hall, Tufts College, Mass.)

- SEPT. 16. Elementary, Intermediate, and Advanced French, 9 to 11; Elementary, Intermediate, and Advanced German, 11 to 1; Elementary and Advanced Greek, Advanced Algebra and Trigonometry, 2 to 5; \*American History, 2 to 4; English History, 4 to 6.
- SEPT. 17. Algebra, 9 to 10.30; English, 10.30 to 12.30; Plane Geometry, 2 to 4; Physics, 4 to 5.

<sup>\*</sup> Persons desiring to be examined in Medieval or Modern History are requested to confer with the examiner.

SEPT. 18. Elementary, Intermediate, Advanced Latin and Drawing, 9 to 12; Solid Geometry, 9 to 11; Biology, Botany, Geography, Geology, Zoology, and Economics, 11 to 1; Ancient History, 2 to 4; Chemistry, 4 to 5.

# Admission from other Colleges

Students of other colleges may be admitted to Tufts College under the following conditions:

They must present evidence that they have maintained creditable and honorable standing. They must present certificates showing in detail the amount and character of their college work. They must give satisfactory reasons for desiring transfer.

Such students will be enrolled as "unclassified" until they have demonstrated their qualifications and scholarship.

# General Information

#### REGISTRATION

Having passed the entrance examinations of June or of September, or having been duly certified, the applicant for admission should at once ask the College office for registration blanks. These blanks should be filled out promptly and with fidelity, and returned to the Registrar, together with the registration fee of five dollars.

The officers of Tufts College take an interest in the welfare of the student, and the value of the advice which they can give is in no small measure dependent upon the fullness with which the registration data are given.

#### THE FILING OF PROGRAMS

The program is a statement of the several studies that the student desires to pursue, the officers that are to give instruction and the places and hours at which the classes are to meet. Programs are prepared in accordance with the following schedule.

- I. For students in the School of Liberal Arts, the Crane Theological School, and the Graduate School:
- 9.30 A.M.—On the "opening day" of the term (in October on Thursday, and in February on Monday), those filing their programs for the first time assemble in Room 4, Ballou Hall, at which time the students are assigned to certain officers who act as their advisers in the preparation of their programs. When the programs are prepared, they are filed with the Registrar.

9-II A.M.—Members of the three upper classes file their programs in accordance with conferences which were held with their major instructors during the previous term.

# II. FOR STUDENTS IN JACKSON COLLEGE FOR WOMEN:

11 A.M.-12 M.—On the "opening day" of the term, all students obtain blanks and file programs at the Dean's office. Members of the three upper classes register in accordance with programs prepared at conference with major instructors held previous to June first.

11.15. A.M.—All students registering for the first time assemble in Room 10, Miner Hall, for instruction concerning registration.

# III. FOR STUDENTS IN THE ENGINEERING SCHOOL AND THE BROWFIELD-PEARSON SCHOOL:

10 A.M.—On the "opening day" of the term, those filing their programs for the first time assemble in Robinson Hall, room 23, where information is given concerning courses of study and the preparation of programs.

After the programs are prepared they are filed with the Registrar.

10-12 A.M.—Members of the three upper classes file their programs in accordance with conferences held during the examination period of the previous term.

During the hours set apart for filing of programs, instructors are available for consultation and for the approval of plans of study, in rooms announced on the bulletin board.

Regular program appointments are in force on the second day of each term.

The College desires that its students should begin their work with promptness. Students who are late in registering or in filing their programs cause irregularities and confusion in the administrative office. Upper-class men who are not present on the "opening day" are subject to a registration fee of five dollars.

#### PROMOTION

Students are not promoted from the Freshman class until they have completed all requirements for admission.

Candidates for the degree of Bachelor of Arts or Bachelor of Science (except in Engineering), before promotion to the Sophomore class, must have received a credit of not less than twenty-four term hours, and for promotion to the Junior class a credit of not less than fifty-four term hours. To become a member of the Senior class, a student must have credit for not less than eighty-seven term hours, and to graduate he must have had a credit of one hundred twenty-two term hours.

Candidates for the degree of Bachelor of Science in Engineering must have received, for promotion to the Sophomore class, a credit of not less than twenty-nine term hours; for promotion to the Junior class a credit of not less than sixty-four term hours; for promotion to the Senior class a credit of not less than ninety-nine term hours, and for graduation a credit of one hundred forty term hours.

#### GRADES OF SCHOLARSHIP

Scholastic standing is officially recorded as follows: A, excellent; B, good; C, fair; L, barely passable; F, not passable; FF, discreditable. I is used when a student for any cause fails to complete a subject.

The marks I and F impose a condition which must be removed at a date to be determined by the Committee on Promotions. In case marks of I or F are not so removed, the entry will be changed to FF. The responsibility for the removal of any condition rests with the student, who is required to make all necessary arrangements with the instructor and finally to present at the office of the Registrar a statement from the instructor that the work has been performed.

Reports of the work of Freshmen are sent to parents at the close of the first term. Reports for the year are issued in July.

#### TERMS AND VACATIONS

The year is divided into two terms. College exercises are suspended on certain dates in accordance with the calendar published at the beginning of the catalogue. An examination period of five days is held at the close of each term, during which the daily class exercises are suspended.

Students are not expected to extend their vacations by absenting themselves beyond the limit of the calendar. To prevent this extension they are required, except on holidays, to report in person at the Registrar's office within the two hours following the last class appointment preceding each vacation except at the mid-year intermission; and within two hours before their first class appointment following such vacation. This process is known as "signing off" and "signing on."

A fine of two dollars will be imposed on each student who shall fail to report as above provided. The regular registration at the beginning of each term shall be construed as "signing on."

#### ABSENCES

Students are required to notify the Registrar of absence from any cause involving more than three consecutive program appointments. This report should, if possible, be made in advance, and should state the cause of absence and the probable duration. After absence, notification should be given the Registrar before entering upon college work.

These reports are for the information of the college authorities, and do not excuse the student from chapel attendance, or from his obligations to the various instructors.

No student organization is allowed to make engagements involving absence from college exercises unless such engagements are first approved by the appropriate committee of the Faculty.

# RELIGIOUS OBSERVANCES

Goddard Chapel, erected in 1882-83, is the gift of Mrs. Mary T. Goddard, as a memorial to her husband, Thomas A. Goddard. The week-day exercises are conducted by the College Chaplain, Dr. Edwin C. Bolles. Attendance is required.

The RUSSELL LECTURE, established in accordance with a bequest of James Russell of Arlington, is delivered by either a clergyman or a layman, on a subject prescribed by the testator.

Two subjects are presented, in alternate years.

The subject for 1917 was "The Sufficiency of the Promises of the Gospel to meet the Reasonable Wants of Man both in Time and in Eternity."

The subject for 1918 is "The Importance of Christian Faith and Belief in the Formation of the Character of the Good Citizen and the Good Man."

# TUFTS COLLEGE STUDIES

A publication called "Tufts College Studies" has been established, as a means of presenting the results of original work done in the several departments of the College. The numbers, which are issued from time to time, are distributed as exchanges to educational institutions and learned societies. Correspondence regarding exchanges should be addressed to the Librarian of Tufts College.

## ATHLETICS

The supervision and direction of all athletic sports is vested in a Board of Directors of Athletics, consisting of nine members, three of whom are appointed from the Faculty, three from the Alumni, and three elected from the Undergraduates. This board through its sub-committees controls the expenditure of moneys, the hiring of coaches, the eligibility of players, and the arranging of games. The Director of the Gymnasium, after physical examination, limits the candidates for college teams to those who have shown themselves qualified to engage in strenuous exercise.

# EXPENSES

Realizing that the cost of collegiate instruction may prevent ertain students from carrying their education beyond that proided by the public schools, and desiring that the facilities affered by Tufts College shall not be denied those of limited neans, the Trustees have, for many years, refrained from making any increase in the charge for tuition.

The buildings, grounds and various endowments of the College have an aggregate value of over \$3,000,000 so that the amount actually paid to the College by any student is only a fraction of the cost of the instruction provided.

The expenses of the student are as follows:

#### Examination Fee

A fee of five dollars is charged for examining the student, in order to test the thoroughness of his preparation and to determine his fitness for collegiate work.

If the student is examined in June by the College Entrance Examination Board, the fee is sent by the student to the Secretary of the Board, 431 West 117th St., New York, N.Y.

If the student is examined in September by examiners at Tufts College, the fee is paid to the Bursar of the College before the examination is taken. If the student is examined in both June and September, two fees are necessary.

If the student enters "on certificate" or on the "academic diploma" of the Regents of the State of New York, there is no examination fee.

# Registration Fee

This charge of five dollars is made but once. It covers the cost of registering the student as a member of the College, and gives provisional enrollment until the courses of study have been arranged. It is a guarantee on the part of the student of his intention to assume the duties and privileges of student-membership in some one of the Associated Schools of the College.

## Tuition Fee

The charge for each term or semester of instruction in the several Associated Schools is given in the following table.

School of Liberal Arts	۰			\$62.50
Jackson College for Women		٠	٠	62.50
Engineering School	٠			87.50
Bromfield-Pearson School .		٠		75.00
Crane Theological School .				50.00
Graduate School				50.00

Before receiving the degree of A.B. or B.S. students must have paid tuition charges for eight terms of instruction. This regulation applies whether the time actually consumed is three, four, or more college years.

In the case of students admitted to advanced standing the fees will be prorated.

# Fees For Gymnasium And Student Organizations

By request of the student body, the Bursar has been instructed to collect assessments for the maintenance of student activities, such as field-sports, the college *Weekly*, reading room, etc. These are combined with the gymnasium fee and amount to \$12.00 for the first term and \$5.00 for the second term. Each student is put on the subscription list of the *Tufts Weekly*, and receives a season ticket admitting him to the intercollegiate contests.

#### Room Rent

Students may or may not reside on the campus. It is customary for a dormitory room, or suite of rooms, to be occupied by two students. Each pays one-half rent, which, including heat and services, ranges from \$12.50 to \$40.00 per term. The rooms may be occupied from the Wednesday of the week preceding the opening of the College year to the Saturday following Commencement. Except in Paige Hall, students provide their own furniture.

The students are custodians of the rooms and dormitories in which they reside. Injury to the rooms or buildings other than normal wear is charged to the occupants.

Non-resident students may obtain the use of "day rooms" upon he payment of a moderate fee. The rooms are assigned by the Bursar, under regulations approved by the Board of Trustees. All correspondence connected with the engagement and assignnent of rooms should be addressed to the Bursar.

Room rent in the several dormitories may be tabulated as ollows; the prices given are the rate per student per term.

# Dormitories For Men

## Double Rooms

	Curtis	Dean	East	Paige	West	Total		
\$13.75			2			2		
15.00			2			2		
18.50					2	2		
20.00	2		4		2	8		
21.50	6	2	4			12		
22.50	I		1			2		
23.00	4		2,		2	4		
24.00		. ,	I		6	7		
25.00	I		, 5		2 .	8		
25.50			Ι.,		2	3		
27.50		• •	5			5		
29.50			I		2	3		
32.00					6	6		
35.00		4			4	4		
37.50					2	2		
40.00		12			· 2	14		
Total Double Rooms	10	14 .	28	0	32	84		
Single Rooms								
\$12.50					1	1		
15.00			I			1		
20.00			3			3		
21.50	•		2			2		
22.50	I					1		
25.00	I					1		
37.50				36		36		
Total Single Rooms	2	0	6 ,	36	I	45		
Total =	12	14	34	36	33	129		

## General Maintenance Fee

To defray a part of the cost of maintaining buildings and grounds, students are assessed five dollars per term. This fee is included in the rental charges of those residing at the College.

## Laboratory and Other Fees

Students taking laboratory courses in Geology, Mineralogy, Chemistry or Biology are charged four dollars per term for material regularly consumed. The cost of breakage is collected at the close of the term. Before graduation, seniors are charged two dollars to cover the cost of the diploma.

#### THE TIMES AT WHICH COLLEGE PAYMENTS ARE MADE

All term bills must be paid in advance, and the College prefers to have the charges of the entire term paid at the time of registration, or before the date of the opening of the term. Realizing, however, that it is sometimes difficult for those who are working their way to comply with this regulation, it permits, for the present, the following schedule, to the terms of which it is obliged rigidly to adhere:

#### First Term

On or before October 4, \$50, On account.
" November 1, Balance of term bill.

#### Second Term

On or before February 18, \$50, On account.

"March 1, Balance of term bill.

All college charges are collected by the Bursar. Checks should be made payable to the Trustees of Tufts College. Promotions, degrees and letters of honorable dismissal cannot be granted to those in arrears.

A student may be suspended or dismissed for failure to keep his bills promptly paid, or for other good and sufficient cause.

No part of the fees and charges for a term is returnable to the student if he leaves during the term.

#### SCHOLARSHIPS

Tufts College has been singularly blessed in that many of its friends have given various sums, the interest on which is awarded to students who find it difficult to meet all of the financial exactions of college training.

Scholarships are awarded by the Trustees on the recommendation of the Faculty. The Faculty desires to become acquainted with the students before making its recommendation, and it therefore advises those who are coming to the College for the first time and who feel that they must have scholarship aid, to make early request to the Registrar for a scholarship application blank and to fill in this blank and mail it to the Chairman of the Scholarship Committee prior to the beginning of the term.

The student should, if possible, be prepared, himself, to meet the first payment of the term, — that is, the payment due October 4, or February 18. After the scholarship has been awarded, it will be credited to the second payment and reduce this amount accordingly.

In the year 1916-17 the Trustees distributed approximately \$12,000 to students in good standing. During the first term of the year 1917-18 scholarship awards were made as follows:

116 awards of \$25.00 each
9 " " 37.50 "
13 " " 50.00 "
3 " " 62.50 "

Scholarship aid will depend upon the student's need and the grade of his work. His obligations to the College must be met promptly, his attendance must be regular, and his influence on the student body must be in every sense wholesome. His loyalty to the College and his sense of common gratitude should dictate that as soon as possible after graduation he return to the College the several sums that he has received in order that others in need may be assisted in their efforts to obtain privileges similar to those that he has enjoyed.

The scholarships and the amount of the endowment are here listed.

THE STATE SCHOLARSHIPS. (3)

Established in 1859 in accordance with a resolve of the Commonwealth The A. A. Miner Scholarship. \$1,000

Founded in 1864 by Alonzo Ames Miner, D.D., of Boston.

THE HOWLAND SCHOLARSHIPS. (5)  Established in 1865 from the income of the bequest of Edwin of South Africa.	10,366.8; Howland
THE WALKER MATHEMATICAL SCHOLARSHIPS. (5) Established in 1865 in honor of William J. Walker, M.D., of R. I., and payable from the income of the Walker Fund.	Newport
THE PERKINS SCHOLARSHIP.  Founded in 1866 by James D. Perkins, of New Rochelle, N.	\$1,000 Y.
THE MOSES DAY SCHOLARSHIPS. (2)  Founded in 1880 by Moses Day, of Roxbury.	\$4,000
THE MOSES DAY SCHOLARSHIP.  Founded in 1880 by Moses Day, of Roxbury.	\$1,000
THE ANDERSON SCHOLARSHIP.  Founded in 1890 by John M. Anderson, of Salem, in the John M. and Rebecca Anderson.	\$2,000 name of
THE WILLIAM OSCAR CORNELL SCHOLARSHIP.  Founded in 1890 by William Oscar Cornell, of Providence,	\$2,500 R. I.
THE MARTHA GOLDTHWAITE MEMORIAL SCHOLARSHIP.  Founded in 1890 by Willard Goldthwaite, of Salem.	\$2,000
CHE A. A. MINER SCHOLARSHIP.  Founded in 1890 by Alonzo Ames Miner, D.D., of Boston.	\$2,000
THE NORCROSS SCHOLARSHIP.  Founded in 1890 by James A. and Mrs. Mary E. Noro Worcester.	\$2,000 cross, of
THE REBECCA T. ROBINSON SCHOLARSHIP.  Founded in 1890 by Charles Robinson, LL.D., of Newton.	\$2,000
HE LAURA A. SCOTT SCHOLARSHIP.  Founded in 1890 by Mrs. Laura A. Scott, of Ridgefield, Con	\$2,000 n.
HE STOW SCHOLARSHIP. Founded in 1890 by Mrs. Eugenia D. Stow, of Meriden, Con	\$2,000 nn.
HE TALBOT SCHOLARSHIP. Founded in 1890 by Newton Talbot, of Boston.	\$2,000
TRAVELLI SCHOLARSHIP. Founded in 1890 by Mrs. Emma R. Travelli, of Newton.	\$2,000
THE AMASA AND HANNAH L. WHITING SCHOLARSHIP.  Founded in 1890 by Mrs. Hannah L. Whiting, of Hingham.	\$2,000
THE WHITTIER SCHOLARSHIP.  Founded in 1890 by Charles Whittier, of Roxbury, in the Charles and Eliza Isabel Whittier.	\$2,00 <b>0</b> name of

Established in 1890 from a bequest of Mrs. Maria P. Winn, of Woburn.

\$2,000

\$2,000

\$2,000

THE MARIA P. WINN SCHOLARSHIP.

THE HENRY F. BARROWS SCHOLARSHIP.

THE HOSEA BALLOU, 2D, MEMORIAL SCHOLARSHIP.

Founded in 1891 by Mrs. Mary T. Goddard, of Newton.

Founded in 1891 by Henry F. Barrows, of North Attleboro.

THE EDWIN H. CHAPIN MEMORIAL SCHOLARSHIP.	\$2,000
Founded in 1891 by friends of Edwin Hubbell Chapin,	D.D, o
New York City.	
THE ANDREW J. CLARK MEMORIAL SCHOLARSHIP.	\$2,000
Founded in 1891 by Mrs. Abbie B. Clark, of Orange.	
THE HENRY E. COBB SCHOLARSHIP.	\$2,000
Founded in 1891 by Henry E. Cobb, of Boston.	
THE COUSENS SCHOLARSHIP.	\$2,000
Founded in 1891 by John E. Cousens, of Brookline, in the	
of John E. and Sarah C. Cousens.	
THE THOMAS A. GODDARD MEMORIAL SCHOLARSHIP.	\$2,000
Founded in 1891 by Mrs. Mary T. Goddard, of Newton.	
THE J. H. MORLEY MEMORIAL SCHOLARSHIP.	\$2,000
Founded in 1891 by Herbert Small Morley, of Templeton.	<i>"</i> ,
THE ELLERY E. PECK MEMORIAL SCHOLARSHIP.	\$2,500
Founded in 1891 by Henry Rollins, of Bangor, Me.	#2,500
THE SARAH E. SAYLES MEMORIAL SCHOLARSHIP.	\$2,000
Founded in 1891 by Albert W. Sayles, of Lowell.	<i>\$2,000</i>
THE BENJAMIN F. SPINNEY SCHOLARSHIP.	\$2,000
Founded in 1891 by Benjamin F. Spinney, of Lynn.	<i>\$2,000</i>
THE SIMONS MEMORIAL SCHOLARSHIP.	\$2,000
Founded in 1891 by Mrs. Mary A. Simons, of Manchester, N	" '
memory of Hiram H., Augustus, and Frank Simons.	
THE MARY ANN WARD SCHOLARSHIP.	\$2,000
Founded in 1892 by Sylvester L. Ward of Boston.	\$2,000
THE SIMMONS SCHOLARSHIPS. (2)	\$4,000
Founded in 1895 by Robert F. Simmons, of Attleboro, in the	
Mary F. and Robert F. Simmons.	name of
THE JOHN B. PERKINS SCHOLARSHIP.	\$2,000
Founded in 1896 by Ann Maria Perkins, of Medford.	\$2,000
THE JOSHUA S. AND HARRIET N. WHITE SCHOLARSHIP.	#
Founded in 1896 by Joshua S. White, of Pawtucket, R. I.	\$2,000
	#w 000
THE BARNARD SCHOLARSHIPS. (3) Founded in 1897 by Mrs. Caroline M. Barnard, of Everett.	\$7,000
rounded in 1897 by Mis. Caroline M. Darnard, or Everett.	

THE BARTLETT SCHOLARSHIP.

\$2,000

Founded in 1897 by Mrs. Nancy Bartlett, of Milford.	<i>\$</i> 2,000
THE B. H. DAVIS SCHOLARSHIP.  Founded in 1897 by the Rev. B. H. Davis, of Weymouth, benefit of students of the School of Liberal Arts who are preto enter the Christian ministry.	
THE LATIMER W. BALLOU SCHOLARSHIP.  Founded in 1898 by Latimer W. Ballou, of Woonsocket, R. I.	\$2,000
THE JOSEPH D. PEIRCE MEMORIAL SCHOLARSHIP.  Founded in 1898 by the children and other relatives of J. D. D.D., of Attleboro.	\$1,250 Peirce,
THE JOSEPH H. WALKER SCHOLARSHIP.  Founded in 1898 by Joseph H. Walker, of Worcester.	\$1,000
THE RHODE ISLAND SCHOLARSHIP.  Founded in 1899 by several persons in Rhode Island.	\$2,100
THE GEORGE C. THOMAS SCHOLARSHIP.  Founded in 1899 by George C. Thomas, of Philadelphia, Pa.	\$1,000
THE ALBERT W. SAYLES SCHOLARSHIP. Founded in 1899 by Albert W. Sayles, of Lowell.	\$1,466
THE NATHANIEL WHITE SCHOLARSHIP.  Founded in 1899 by Armenia S. White, of Concord, N. H.	\$1,200
THE LIZZIE P. ALLEN SCHOLARSHIP.  Founded in 1900 by Lizzie P. Allen, of Derby Line, Vermont.	\$2,000
THE LIZZIE P. ALLEN SCHOLARSHIP.  Founded in 1900 by Lizzie P. Allen, of Derby Line, Vermont.	\$1,000
THE CHARLES AND FANNIE A. MINER BOOTH SCHOLARSHIPS. (2) Founded in 1900 by Charles Booth, of Springfield, Vermont.	\$5,000
THE LUTHER GILBERT SCHOLARSHIP.  Founded in 1902 by Mrs. Luther Gilbert, of Roxbury.	\$2,000
THE JAMES M. AND EMILY COOK SCHOLARSHIP. Founded in 1903 by Henrietta J. States, of Boston.	\$2,000
THE WILLIAM H. SHERMAN SCHOLARSHIP.  Founded in 1903 by William H. Sherman, of Cambridge.	\$2,000
THE DAVIS COOK SCHOLARSHIP.  Founded in 1904 by Davis Cook, of Cumberland, R. I.	\$2,000
THE MARY A. RICHARDSON SCHOLARSHIP. Founded in 1904 by Mrs. Mary A. Richardson, of Worcester.	\$2,500
THE AUSTIN B. FLETCHER SCHOLARSHIP.  Founded in 1905 by Austin Barclay Fletcher, of New York Cit	\$2,000 y.

\$2,000

THE WARREN SCHOLARSHIPS. Founded in 1905 by Dr. Ira Warren of Boston.

THE MARY L. GROCE SCHOLARSHIP.

Founded in 1906 by Mary L. Groce, of Roxbury.

THE JONAS CLARK WELLINGTON SCHOLARSHIP. \$2,500 Founded in 1906 by Mrs. Sarah C. Fisher Wellington, of Cambridge. THE JOHN MURRAY SPRAGUE AND ELIZA FLETCHER SPRAGUE SCHOL-

ARSHIP. \$2,000

Founded in 1908 by John Sprague, of Lowell.

THE GEORGE STEVENS BALLARD SCHOLARSHIP. \$2,000 Founded in 1910 by Caroline D. M. Ballard, of Augusta, Me.

THE RICHARD PERRY BUSH SCHOLARSHIP. \$2,000 Founded in 1910 by Mrs. Caroline M. Barnard, of Everett.

THE HANNAH S. MOULTON SCHOLARSHIPS. (4) \$10,150 Founded in 1914 by Hannah S. Moulton of Kensington, N. H.

THE CYRUS V. BACON AND ADA B. W. BACON SCHOLARSHIP. \$2,500 Founded in 1915 by Mrs. Ada B. W. Bacon, of Hingham

THE James O. CURTIS SCHOLARSHIP. \$1,000 Founded in 1915 by Betsy B. Curtis, of Medford

THE TRUSTEE SCHOLARSHIPS.

A limited number of special scholarships of one hundred dollars each are available for needy students in the School of Liberal Arts who reside in college dormitories.

### LOAN FUNDS

The College is enabled, through the generosity of certain benefactors, particularly through the gifts of Dr. Ira Warren, John W. Farwell, and Thomas O. Hill, to make loans in small amounts. It is the preference of the College to limit the loaning of money to the members of the Senior class. Applications should be made to the Chairman of the Scholarship Committee.

# ACADEMIC HONORS, PRIZE SCHOLARSHIPS, AND PRIZES

On the third Wednesday in November, the Associated Schools meet the several Faculties in Goddard Chapel in academic convocation. At this time public announcement is made of those who have been selected to represent the Senior class on the commencement platform, and of the recipients of prize scholarships and prizes.

The following Prize Scholarship Funds have been established and scholarships from the income are awarded under special conditions:

## THE GREENWOOD PRIZE SCHOLARSHIP IN ORATORY.

\$1,000

Founded in 1877 by Mrs. Eliza M. Greenwood, of Malden, and given to such student as shall have made, as the result of faithful work, together with at least a fair degree of attainment, the greatest improvement in Oratory.

# THE WENDELL PHILLIPS MEMORIAL SCHOLARSHIP.

\$1,501

Founded in 1895 to perpetuate the name, fame, and influence of Wendell Phillips. This scholarship is to be awarded to a student who has completed the Freshman and Sophomore years, and he is to have the benefit of it during the remainder of his course. The beneficiary must be of sound body, high character, and ability in declamation and debate, and must comply with certain special conditions, including participation in a competitive debate of the applicants at the end of the Sophomore year. The specific conditions governing the award of this scholarship may be obtained by those intending to apply therefor from the Secretary of the Faculty, to whom application should be made early in the Sophomore year. The income of this scholarship is at present seventy dollars.

# THE Moses True Brown Scholarship.

\$1.000

A scholarship founded in 1903 by Moses True Brown, of Sandusky, Ohio, formerly Professor of Oratory in Tufts College, for encouraging and assisting worthy students in the department of Oratory.

# THE PRIZE SCHOLARSHIP OF THE CLASS OF 1898.

The sum of fifty dollars is given annually by the Class of 1898 to that Senior who at the end of the Junior year shall have maintained the highest excellence in a course of study broadly and wisely chosen.

# THE PRIZE SCHOLARSHIP OF THE CLASS OF 1882.

The sum of one hundred dollars is given annually by the class of 1882 to that member of the College who best exemplifies the combination of ability in athletics and excellence in scholarship.

# The following prizes are awarded:

# THE GODDARD PRIZES.

Three prizes of fifteen dollars each are assigned annually from the Goddard Prize Fund. In 1917-18 these prizes will be awarded in the departments of French, Political Science, and Chemistry, under the following conditions:

French.—A prize for that member of the class in French 32-4 who has done the most proficient work in the subject.

Political Science.—A prize for the best thesis by a student in Political Science on a subject to be approved by the head of the department. Theses prepared for courses will be accepted in competition.

Chemistry.—A prize for that member of the class in Chemistry 35-2 who has done the most proficient work in Chemistry 35-1 and Chemistry 35-2.

#### THE RHETORICAL PRIZES.

Three prizes are awarded as follows: A first prize of forty dollars, a second prize of thirty dollars, and a third prize of twenty dollars. The preliminary competition will be open to all candidates for the degree of A.B., B.S., and S.T.B. The rhetorical prizes are awarded by a committee, chosen by the Faculty, who judge the work presented by the competitors upon the public day appointed for that purpose. In order to enter the public competition, candidates, as well as their selections, must be approved by the Instructor in Oratory. A preliminary competition is held about ten days before the competition announced in the calendar, at which a committee of the Faculty determine the contestants in the final and public readings.

#### THE DE WITT C. TOMLINSON PRIZES.

Founded by Rev. Irving C. Tomlinson, of Brookline, Mass. Two prizes of thirty and twenty dollars respectively, for the two best essays on the subject of "The Ministry of Christ Jesus." The award of prizes must take into account (1) literary merit; (2) evidence of thorough study, clear insight, and unbiased understanding of the Biblical records of the ministry of Christ Jesus; (3) the treatment of the public and private ministration to those of his own time; (4) the treatment of the universal application of his ministry to all human needs, and (5) the treatment of the means by which the benefits of his ministry may be appropriated by his followers. These prizes are open to Seniors in The School of Liberal Arts, the Engineering School, the Theological School, and Jackson College, and to members of the Graduate School. Details as to conditions of competition may be obtained at the Registrar's office.

The foregoing prizes are not awarded, unless in the opinion of the respective judges there is sufficient merit in the several contests to warrant their distribution.

#### HONORS

Final Honors in the School of Liberal Arts and Jackson College may be conferred at Commencement upon any member of the graduating class who shall have attained Grade A in approved subjects aggregating not less than eighteen term hours in a major department, and an average of Grade B in eighteen hours of allied subjects. Subjects marked with an asterisk (\*) or with a double asterisk (\*\*) will not be counted for Honors. Final Honors will be conferred only upon recommendation of the head of the department in which Honors are desired.

HONORABLE MENTION IN THE SCHOOL OF LIBERAL ARTS AND JACKSON COLLEGE will be made, at Commencement, of any student who has attained, during the two years immediately preceding graduation, Grade A in nine term hours and not less than Grade B in three additional term hours of approved work in one department. Subjects marked in the Catalogue with an asterisk (\*) or with a double asterisk (\*\*) are under the conditions explained above as applying to Final Honors.

Candidates for Honorable Mention are expected to report to the Office on or before May 1 the department or departments in which they look for such distinction.

Final Honors in the Engineering School will be conferred at Commencement upon any member of the graduating class who shall have attained credits in his major department aggregating not less than eighteen term hours of Grade A and nine term hours of Grade B.

Honorable Mention in the Engineering School will be made at Commencement of any student who has attained in any major department during the two years immediately preceding graduation, Grade A in nine term hours and not less than Grade B in six term hours.

Honors and Honorable Mention will be given in the five major departments in the Engineering School subject to the following conditions: 45-1, 45-2, 45-4, and 45-12, Applied Mechanics, may be counted in all departments, and no subject in the curriculum of the Freshman and Sophomore years may be counted in any department. Save as specified above the subjects in the Civil Engineering department will include those numbered (41); in the Structural Engineering department, those numbered (51); in the Mechanical Engineering department, those numbered (61); and in the Chemical Engineering department, those numbered (35).

#### HOSPITAL

The College is the holder of a bed in the Somerville Hospital and its resident students in case of illness (except contagious diseases) are entitled to the benefits thereof without cost. Arrangements must be made through the college office.

#### INSURANCE

Arrangements may be made through the Bursar's office whereby students in any of the dormitories may insure their personal effects, including books, furniture, and wearing apparel. The cost of such insurance is fifty cents for \$100 per year.

#### COMMITTEE ON STUDENT EMPLOYMENT

It is the object of the committee on student employment to inform students concerning positions which may give regular occupation during available hours of term time, or which may be temporarily filled during the vacation periods. Students who wish to make application for any occupation should register their names, with a statement of their qualifications for any special work, with Professor Albert H. Gilmer, Chairman of the Employment Committee, Ballou Hall.

# Buildings and Equipment

#### LIBRARIES

The library building, erected through the gift of Mr. Andrew Carnegie, is called the Eaton Memorial Library, in honor of Charles Henry Eaton, '74, former pastor of the Church of the Divine Paternity, New York City.

In all, about seventy-five thousand bound volumes and sixty-seven thousand pamphlets are available for use. The College regularly receives more than two hundred periodicals. A reading-room, maintained by the students, supplies the daily and weekly papers. Separate rooms have been provided with facilities for the use of students working in the departments of History and Public Law, the Ancient Languages, the Modern Languages, Music, English, the Fine Arts, Philosophy, Political Science, Physics and Mathematics. The average annual increase by donation and purchase, for the last five years, has been about two thousand four hundred volumes.

In the general library is the collection of the Universalist Historical Society (six thousand volumes and several thousand pamphlets), to which, on application, students have access. In Packard Hall is a selected reference library, for the use of theological students. In the Barnum Museum is the department library of Natural History, numbering more than four thousand volumes and over ten thousand pamphlets. The Metcalf Musical Library is divided between the music rooms in Goddard Gymnasium, where the scores are kept, and the department room in the Eaton Memorial Library, which contains a collection of works relating to music. About four hundred representative musical compositions, in form for use upon the automatic instruments in the music rooms, are available to students.

The library building is open to all members of the College daily except Sundays and holidays, from 8.00 A.M. to 5.30 P.M.

#### BARNUM MUSEUM

The Barnum Museum of Natural History was built in 1883-84 by Phineas T. Barnum, who gave the College a fund for its maintenance and for additions.

The College is also indebted to Mr. Barnum for the larger portion of its zoological collection. This serves to illustrate all groups of the animal kingdom, and is especially rich in skeletons and mounted skins of mammals, the whole being well adapted for the purposes of instruction. The botanical collection consists of an herbarium containing a representation of the flora of New England, besides many specimens from Europe and the southern and western States. The geological collection has been selected with care and the mineralogical collection contains many fine examples.

The laboratories and lecture-rooms of the departments of Zoology, Botany and Geology are in the Museum building. The geological laboratory is provided with petrological microscopes, instruments for making rock sections, etc. The mineralogical laboratory possesses the apparatus necessary for the determination of minerals, the analysis of ores, and assay work. The biological laboratories for elementary work are furnished with all necessary facilities, while the laboratory for advanced and research work has all the appliances needed for investigation in anatomy, histology, and embryology.

#### GODDARD GYMNASIUM

Goddard Gymnasium, the gift of Mrs. Mary T. Goddard, is fitted with the apparatus usually seen in modern gymnasiums, including facilities for light and heavy gymnastics, fencing, wrestling, basket ball, base ball, and indoor athletic sports.

The third floor is occupied by the Department of Music. A separate gymnasium are provided for women students.

## ATHLETIC FIELD

Tufts College Athletic Field is the large inclosed field on College Avenue, where inter-collegiate contests are played. It includes a field house, two base-ball diamonds, a foot-ball field, and a quarter-mile, twenty-foot cinder track. Tennis-courts for men and women students are on other fields.

## CHEMICAL BUILDING

The building of the department of Chemistry contains laboratories for general inorganic, organic, analytical, and metallurgical chemistry, a large lecture-room, library, and weighing room, and the private laboratories of the professors in charge. The rooms are provided with modern laboratory conveniences, and are well supplied with apparatus and chemicals.

## ROBINSON HALL

Robinson Hall, a memorial to Charles Robinson, is designed for the use of the Engineering School. It contains the laboratories for the Departments of Physics and Electricity and some of the laboratory equipment for the Departments of Civil and Mechanical Engineering. Beside these laboratories there are recitation rooms, a lecture hall and offices for the instructors and the Dean of the Engineering School. The drafting rooms for Civil and Structural Engineering are also in this building.

#### BROMFIELD-PEARSON BUILDING

The Bromfield-Pearson Building, built from funds given by Henry Bromfield Pearson, is largely used by the Departments of Drawing and Mechanic Arts. It contains the library and offices of the Department of Mechanical Engineering.

#### ENGINEERING LABORATORIES

The engineering laboratories are supplied with power and light from a Harrisburg Standard engine directly coupled to a direct current General Electric generator.

The Civil Engineering Laboratories contain the Cement and Highway testing apparatus including abrasion machines for paving material and the machines for testing cement and other highway materials. The surveying apparatus includes a very complete and varied equipment of transits, levels, plane tables, sextants, compasses, and the usual auxiliary apparatus.

The Hydraulic Laboratory is equipped with a 600 gallon Worthington duplex steam pump, a 300 gallon Lawrence centrifugal pump, steam pulsometer, Pelton water wheel and a Gould hydraulic ram. A 4500 gallon channel serves for supply and discharge from the several pumps and contains the weirs and necessary apparatus for the measurement of water.

In the Electrical Laboratories will be found the usual equipment of measuring instruments, dynamos, etc. required for courses in general electrical testing. While the greater part of this is standard apparatus certain of the most useful pieces were specially designed and constructed in the college shops by students in the electrical engineering course. A recent addition to the laboratories is a complete common battery telephone exchange consisting of a three position switch-board with the customary power plant and terminal room equipment. This apparatus is designed particularly for instruction purposes, but is also arranged to be representative of standard installation practice.

The Mechanical Engineering Laboratory equipment includes a Corliss engine with Admiralty condenser, a 15 Kilowatt Curtiss steam turbine and a variety of smaller engines, stationary and marine, of the plain slide valve, piston valve and riding cutoff valve types. There are gas and gasoline engines of from one to four cylinders representing a variety of makes. An automobile and motorcycle testing plant is also included in the equipment. Absorption and brake dynamometers are used for the measurement of power and other machines are provided for oil testing, compressed air and fan tests. The laboratory equipment for experimental mechanics includes testing machines from 10,000 to 150,000 capacity.

# SCHOOL OF LIBERAL ARTS

FRANK GEORGE WREN, A.M., Dean

# Standing Committees

CURRICULUM: Dean Wren, Chairman; Professors Durkee, Fay, Gray, and Schmidt.

PROMOTIONS: Dean Wren, Chairman; Professors Andrews, Denison, Durkee, and Reed.

# Faculty of the School of Liberal Arts

HERMON CAREY BUMPUS, Ph.D., Sc.D., LL.D., PRESIDENT

FRANK G. WREN, A.M., DEAN
Walker Professor of Mathematics

WILLIAM H. REED, A.M., RECORDING SECRETARY
Assistant Professor of Modern Languages

#### Professors

Arranged in the order of their appointment at Tufts College

CHARLES E. FAY, A.M., LITT.D.

Wade Professor of Modern Languages

FRANK W. DURKEE, A.M. Chemistry

LEO R. LEWIS, A.M.

History and Theory of Music

FRED D. LAMBERT, Ph.D.

Botany

WILLIAM K. DENISON, A.M.

Latin Language and Literature

HENRY C. METCALF, Ph.D.

Jackson Professor of Political Science

EDWIN C. BOLLES, Ph.D., D.D., LL.D.

Dickson Professor of English and American History

WILLIAM R. RANSOM, A.M.

Mathematics

ALFRED C. LANE, Ph.D., Sc.D.

Pearson Professor of Geology and Mineralogy

HENRY I. CUSHMAN, A.M., D.D.

Homiletics

HINCKLEY G. MITCHELL, D.D.

Hebrew and Old Testament Exegesis

ARTHUR I. ANDREWS, Ph.D.

History and Public Law

KARL SCHMIDT, Ph.D.

Philosophy and Education

LEE S. McCOLLESTER, S.T.D.

Packard Professor of Christian Theology

HERBERT V. NEAL, Ph.D. Zoology

CLARENCE R. SKINNER, A.M. Applied Christianity

CHARLES H. GRAY, Ph.D. English

HENRY H. MARVIN, Ph.D. Physics

#### **Assistant Professors**

Arranged in the order of their appointment at Tufts College

WILLIAM H. REED, A.M.

Modern Languages

ALBERT H. GILMER, A.M. English

WILLIAM F. WYATT, Ph.D. Greek

#### Instructors

CROSBY F. BAKER, M.S. Chemistry

MARY S. BRUCE, A.M. French

JOSEPH CHANDLER, Ph.D. Organic Chemistry

THOMAS J. CONNER

Director of Physical Training

JOHN L. C. KEEGEN, A.M. English

NATHANIEL H. KNIGHT, B.S. Physics

FRANK W. POTE, B.S. Physics

AUGUSTE L. POULEUR, M.S. Chemistry

HARRIS RICE, S.B.

Walker Special Instructor in Mathematics

LEPINE H. RICE, PH.B.

EDWIN A. SHAW, M.S.

DONALD S. TUCKER, A.M.

Political Science

# Courses of Instruction

In order that the student may pursue studies that are properly correlated and are at the same time adapted to his individual needs and attainments, he is first assigned to a member of the Faculty who acts during the Freshman year as his adviser. The adviser, having ascertained the qualifications and the ambitions of the student, explains to him the several courses of study. The student, prior to May 15, selects as his major department the one in which he plans to do the greater amount of his work. The major instructor of that department acts as the student's adviser during the remainder of his course. The Committee on Promotions has final authority over all plans of study. There are at the present time twelve major departments, each having major instructors as follows:

Department		Major Instructor
Biology		Professor Lambert or Neal
Chemistry	:	Professor Durkee
English		Professor Gray
. French		Professor Fay
German		Professor Fay
Greek		Professor Wyatt
History and Public Law		Professor Andrews
Latin		Professor Denison
Mathematics		Professor Wren
Philosophy and Education		Professor Schmidt
Physics		Professor Marvin
Political Science		Professor Metcalf

# The courses offered are as follows:

- I. A general course, leading to the degree of Bachelor of Arts or Bachelor of Science.
- II. A course leading to the degree of Bachelor of Science in Chemistry.

# GENERAL COURSE LEADING TO THE DEGREE OF BACHELOR OF ARTS OR BACHELOR OF SCIENCE

Required of All Students	
	Hours *
English	6
Mathematics	6
Biology, Chemistry, or Physics	6
Physical Education	2
French, or German, of which at least six hours	
shall be above intermediate grade.	

Candidates for A.B. must also complete six hours in Greek or Latin.

# Majors and Minors

Each candidate for a bachelor's degree must have completed a major in one of the following groups and a minor in each of the two other groups. The purpose of this requirement is that each student shall do a considerable amount of work in one group of studies and at the same time have a reasonable amount of training in the two other groups.

Group 1	Group 2	Group 3
English	Biology	History and Public Law
French	Chemistry	Philosophy and Education
German	Mathematics	Political Science
Greek	Physics	
Latin		

Geology or Mineralogy may be included as a part of the major or minor in an allied science.

A major consists of not less than eighteen hours' work in a single department, but certain subjects, particularly those that are introductory, do not have major value, and, therefore, cannot be counted in composing the eighteen-hour requirement. In the following description such subjects are marked with an astérisk (\*) or double asterisk (\*\*).

A minor consists of not less than twelve hours' work in a single department, and may include introductory subjects but a subject marked with a double asterisk (\*\*\*) cannot be counted in composing the twelve-hour requirement.

<sup>\*</sup>Each department offers a series of subjects for study. The unit indicating the requirements is the hour, which represents a subject pursued one hour a week for a term or one half-year. Thus a subject calling for three hours a week for one term represents a requirement of three hours; if it calls for three hours a week for one year, or two terms, the retainment in that subject is six hours.

The regular Freshman program is as follows:

For A.B.		For B.S.	
	Hours		Hours
English	6	English	6
Mathematics	6	Mathematics	6
Biology, Chemistry, or Physics	s 6	Biology, Chemistry, or Physics	s 6
Greek or Latin	6	French or German	6
Elective	6	Elective	6
Physical Training	I	Physical Training	1

The Elective of the Freshman year may be chosen from one of the following departments:

Biology	Greek
Chemistry	History
English	Latin
French	Physics
German	Political Science

Students who desire to begin preparation for a definite vocation may arrange continuous courses of study leading to the degree of A.B. and B.S. which will combine special fitness for a chosen field with the general training that every educated man should have.

Those preparing for definite vocations or professions should select major subjects as follows:

Vocation Major Subjects
Business Political Science
Consular and Foreign Service History and Public Law
Forestry Biology
Journalism English
Law History and Public Law
Medicine Biology

Those desiring to teach should select as a major the subject in which they intend to specialize and should confer with the Department of Education.

# II. COURSE LEADING TO THE DEGREE OF BACHELOR OF SCIENCE IN CHEMISTRY

The following subjects have been selected and arranged to prepare students for positions in metallurgical laboratories, as chemists with manufacturers or in analytical laboratories, or as assistant chemists for immediate service in the various departments of the United States government. This course may be followed also by those who wish to teach or to do graduate work in Chemistry.

	FRESHM.	AN YEAR
FIRST TERM		SECOND TERM
	Hours	
English I	• • • 3	English 2
Mathematics 14-21	2	Mathematics 14-21 2
Graphics 21-21		Graphics 21-21
Physics 1		Physics 1
Chemistry I		Chemistry 1
	3	3
	SOPHOMO	RE YEAR
FIRST TERM		SECOND TERM
	Hours	Hours
German	• • • 3	German 3
Chemistry 35-2	2	Chemistry 35-3
Chemistry 4	3	Chemistry 4
Physics Laboratory 24-7	· · · I	Physics Laboratory 24-7 2
Electives		Electives
Mathematics		Mathematics
English		English
Biology	2	Biology
inysics 21	2	Thysics 21
	JUNIOR	R VEAR
FIRST TERM	, , , , , ,	SECOND TERM
	Hours	Hours
Chemistry 5	3	Chemistry 5 3
Chemistry q	I	Chemistry 7
Chemistry 35-10	4	Chemistry 35-10 · · · · · · · 4
Control Science r	• • • 3	Political Science 1
Mineralogy I	3	T. 7
Electives		Electives
Ferman		German
Mathematics		Mathematics
listory 1		History I
Biology		Biology
		Crystallography
	SENIOR	
FIRST TERM	TT	Second Term Hours
hemistry 11	Hours	
hemistry 17	3	Chemistry 17
hesis	3	Thesis
eology 5	3	Geology 23
3, 3	3	Geology 24 2
1		Chemistry 8
Electives		Electives
iology		Biology
l liemistry 12		Chemistry 12
Nolitical Science		Political Science
ynamo-Electric Machinery		

# SYNOPSIS OF THE REQUIREMENTS FOR GRADUATION

- (1) The requirement for the degree of Bachelor of Arts or Bachelor of Science is the satisfactory completion of subjects aggregating one hundred twenty-two term hours, including physical training.
- (2) Students are required to attain for graduation a grade of at least C in seventy-two term hours.
- (3) Upon the satisfactory completion of the aggregate hour requirement, the student is entitled to receive the Bachelor's degree, but no student will be granted a degree in less than four years of residence, unless he shall have obtained grade B as an average for his entire work.

# Departments of Instruction in the School of Liberal Arts

In the following description of subjects, the department and name of the officer in charge are first given; then the several subjects, with the introductory subjects first. Each department has its fixed number and each subject its symbol. When subjects do not continue through the year, (F) means that they occur in the first term and (s) means that they occur in the second. Unless otherwise indicated, instruction in each subject is given three times each week and the credit is three term-hours per half-year. Subjects enclosed in brackets are not offered during the current year. An asterisk (\*) indicates that the subject cannot be counted in comprising the eighteen-hour requirement for a major. A double asterisk (\*\*) indicates that the subject cannot be counted in comprising either the eighteen-hour requirement for a major or the twelvehour requirement for a minor. If fewer than four students apply for an announced subject the subject may be omitted.

#### ORDER OF THE DEPARTMENTS

The order of the departments of instruction as printed in this catalogue is as follows:

- 12 English 22 German 32 French 42 Italian 52 Latin 62 Greek 92 Spanish
- 14 Mathematics 24 Physics 34 Chemistry 44 Biology 54 Geology 64 Mineralogy
- 16 Philosophy 26 Education 36 History 46 Public Law and Administration 66 Political Science
  - 18 Oratory 28 Classical Archæology 38 Music 88 Physical Training

#### 12 ENGLISH

#### PROFESSOR GRAY

\*\*12-1. (F) Freshman Composition. The essentials of composition, with practice in the forms of discourse, chiefly exposition and argumentation. Text-book, lectures, themes, conferences, and library reading. Required in all courses.

PROFESSOR GRAY and Mr. KEEGEN; in Jackson College, Professor Davies

- \*\*12-2. (s) Freshman Composition continued. Further practice in the forms of discourse, chiefly narration and description. Text-book, lectures, collateral reading, themes, and conferences. Required in all courses. Professor Gray and Mr. Keegen; in Jackson College, Professor Davies.
- 12-4. (s) Advanced Composition. Study of journalism and practice in newspaper writing. Text-book, analysis of the leading American newspapers, preparation of special articles, and conferences.

ASSISTANT PROFESSOR GILMER

English 12-4 is open to those who have obtained at least grade C in English 12-1 and 12-2.

[12-7. (s) The Forms of Poetry. The principles of versification, with practice in metrical composition, and the study of models of English and American verse. Will be given in 1918–19.

Assistant Professor Gilmer]

12-10. The English Bible as Literature. A study (1) of its various literary forms—narrative, poetry, story, drama, address; (2) of its backgrounds in government, history, geography, and social customs; (3) of the influence of Biblical Literature on all forms of English Literature.

PROFESSOR MCCOLLESTER

12-11. General View of English Literature. Historical outline of the development of English Literature and reading of representative master-pieces. Text-book, lectures, book of selections, and reading reports.

PROFESSOR GRAY and MR. KEEGEN

Students majoring in English are required to take 12-11 or 12-12, early in their course.

12-12. American Literature. A general survey of American literature, aiming to make clear the characteristics of the most important literaty periods, the writers, and their works. Text-book, lectures, reading, and essays.

Assistant Professor Gilmer

12-13. (s) Special study in American Literature. The study of a group of representative authors: Hawthorne, Poe, Holmes, Lowell, and Thoreau. Reading, lectures, reports, and discussions.

MR. KEEGEN

12-11 or 12-12 must precede 12-13.

- 12-17. (F) Shakespeare. A study of the life and times of Shakespeare, and of his development as a dramatist, illustrated by reading a series of selected plays.

  Assistant Professor Gilmer
- 12-18. (s) Shakespeare. Critical reading of a few plays not included in 12-17, with special attention to text and problems of research. Lectures, quizzes, investigation, and reports.

  PROFESSOR GRAY
- 12-23. (F) The Short Story. Narrative composition based mainly upon the study of the short story. Analysis of the principles of structure, practice-writing, and criticism of original manuscripts in class.

ASSISTANT PROFESSOR GILMER

- 12-24. (F) Poetry of the Nineteenth Century. Wordsworth, Coleridge, Scott, Byron, Shelley, Keats, Rossetti, Tennyson, and the Brownings. Lectures, reading, library work, and reports.

  PROFESSOR GRAY
- 12-25. Development of the Drama. A comprehensive study of the growth of the drama from its origin in Greece to plays of to-day. Many specimens of dramatic literature, Greek, Roman, English, and American, are read, summarized, and criticised in relation to dramatic principles.

ASSISTANT PROFESSOR GILMER

- 12-29. Seminar; for advanced students specializing in English. 1917-18. (F) The origin of the English Novel and its development to the nineteenth century. (s) The English Novel of the nineteenth century. 1918-19 (F) The Age of Chaucer. The reading of Chaucer's chief works in modernized version, with library reading and lectures on the historical and social background. (s) Milton and his Time. Selected readings from Milton's poetry and prose, with library reading and lectures on the historical and social background. 1919-20, Tennyson and Browning. An extensive study of the Victorian Age, philosophical as well as literary, based on the chief works of these authors. (F) Tennyson; (s) Browning.
- 12-31. (s) The History of the English Language. The general principles of philology and a general survey of the development of the English Language; presented by text-book and lectures; for prospective teachers especially, but open to all students having had 12-11. PROFESSOR GRAY

12-32. (s) Readings from English Literature. A course in literary appreciation conducted informally; class attendance twice per week and a weekly written report; credit, one term hour. The readings will be given by the members of the English Department; chairman,

ASSISTANT PROFESSOR GILMER

12-36. (s) Prose of the Nineteenth Century. Lamb, De Quincey, Newman, Landor, Ruskin, Carlyle. Lectures, reading, library work, and reports.

Professor Gray

The following rules, passed by the Faculty February 26, 1917, apply to the student's English work in other departments:

"In order to provide for the maintenance of a suitable standard of English composition in the College, all instructors will report to the Dean the names of students who are exceptionally poor spellers, or who habitually use English that lacks clearness of expression or logical arrangement of subject matter; when a student has been reported three times for defective English, he shall be referred by the Dean to the English Department, which shall impose such corrective work as it deems necessary; this corrective work shall be regarded as part of the work necessary for the Bachelor's degree."

#### 22 GERMAN

# PROFESSOR FAY

\*\*22-1. Elementary German. The essentials of grammar; reading of simple modern prose; practice in writing simple sentences.

ASSISTANT PROFESSOR REED

German 22-1 is the equivalent of the entrance requirement in Elementary German.

\*22-2. Intermediate German. Reading of modern prose, lyrics and ballads; review of grammatical principles; practice in writing German.

ASSISTANT PROFESSOR REED

German 22-2 is open to entering students who have presented Elementary German for admission.

22-3. Course in advanced reading. Selected works from the literature of the eighteenth and nineteenth centuries.

PROFESSOR FAY and ASSISTANT PROFESSOR REED

German 22-3 is open to entering students who have presented Intermediate German for admission. Either half-year may be taken as a half-subject.

22-3B. German Composition, written and oral.

ASSISTANT PROFESSOR REED

German 22-3B is open to students who have satisfactorily passed German 22-3 or its equivalent.

22-4. Schiller and Goethe. Maria Stuart, Wallenstein; Egmont, and selections from prose works of Goethe. Collateral reading.

PROFESSOR FAY

German 22-4 is open to entering students who have presented Advanced German for admission. Juniors and Seniors whose major department is German may be permitted to take 22-4 and 22-5 in the same year.

- 22-5. Advanced reading in Lessing and Goethe. Nathan der Weise, Emilia Galotti, Laokoön, von Berlichingen, Tasso, Iphigenie, Faust, Parts I and II, with collateral reading.

  PROFESSOR FAY
- [22-6. History of German Literature, with illustrative works for leading epochs. Middle High German: Bachmann, Mittelhochdeutsches Lesebuch.

PROFESSOR FAY]

#### 32 FRENCH

#### PROFESSOR FAY

\*\*32-1. Elementary French. The essentials of grammar, with composition, and the reading of short works of modern authors in prose and verse.

PROFESSOR FAV

French 32-1 is the equivalent of the entrance requirement in Elementary French.

- 32-1A. Tone-Production and Phonetics with application to the French language.

  Miss Bruce
- \*32-2. Intermediate French. Review of grammatical principles, especially with reference to syntax; exercise in composition; vocabulary practice; reading of modern fiction and drama, such as Mérimée's Colomba and Sandeau's Mademoiselle de la Seiglière.

PROFESSOR LEWIS

French 32-2 is open to entering students who have presented Elementary French for admission.

32-3. Reading of modern authors (Taine or de Vigny, and novelists); introduction to seventeenth-century classics (Corneille, Racine, Molière, Boileau). Review of grammatical principles, with advanced vocabulary practice.

Professor Lewis

French 32-3 is open to entering students who have presented Intermediate French for admission. Either half-year may be taken as a half-subject.

32-3B. French Composition. Translation from the English (Talbot's Prose Composition); later from the German, the work being based on Ploetz' Nouvelle Grammaire Française and Uebungen zur Französischen Syntax.

PROFESSOR FAY

French 32-3B is open to students who have completed French 32-3, or its equivalent, and at least one course in German.

32-4. Literature and Manners of the Seventeenth Century. Crane's Société Française au XVIIe Siècle; Molière, Le Misanthrope, Les Précieuses Ridicules, Les Femmes Savantes; Boileau, Les Héros de Roman; Warren's French Prose of the Seventeenth Century. Collateral reading.

PROFESSOR FAY

French 32-4 is open to entering students who have presented Advanced French for admission. Juniors and Seniors whose major department is French may be permitted to take 32-4 and 32-5 in the same year.

- 32-5. Literature of the Eighteenth and Nineteenth Centuries. The drama, poetry, the novel, the philosophical essay and criticism. Either half-year may be taken as a half-subject. Professor Lewis
- [32-6. Historical Grammar. Old French readings: Chanson de Roland, Villehardouin, Joinville. History of French Literature. Detailed study of sixteenth century, with illustrative texts.

  PROFESSOR FAY]

#### 42 ITALIAN

# PROFESSOR FAY

[42-1. Grandgent's Grammar and Composition; Bergen's Italian Reader; Maffei, Merope; Dante, Divina Commedia (Scartazzini's edition).

PROFESSOR FAY]

The above subject alternates with 92-1 Spanish. These subjects are open to candidates for A.B. who have done satisfactory work in French above intermediate grade.

#### 52 LATIN

## PROFESSOR DENISON

\*52-1. Cicero, Selections from the Letters or De Amicitia; Livy; Selections of Latin Verse from the earliest period to the late writers, including examples of Latin Hymns. The object aimed at in the second part of the course is to give to those who may not pursue Latin further a general conception of the best Latin verse, and to others a sound basis for more detailed study of certain Latin poets. Literary values will be considered, and some practical aspects of Latin study will be emphasized. Professor Denison

Latin 52-1 is introductory to all later subjects.

52-2. Pliny, selected letters; Horace, Odes; Terence, one play; Apuleius, Story of Cupid and Psyche; Petronius, Cena Trimalchionis. This subject introduces the student to the early drama and also to the authors of the Silver Age, and in addition affords opportunity for the detailed study of the Odes of the Augustan poet, Horace.

PROFESSOR DENISON

Latin 52-2 is open to students who have completed Latin 52-1.

[52-3. Oxford Selection of Latin Verse, or selections from the Satires of Juvenal and Epigrams of Martial; Cicero; Tacitus; reading at sight.

PROFESSOR DENISON1

**52-4.** Horace, Satires and Epistles; Plautus, one or more plays; Cicero selected letters; reading at sight.

PROFESSOR DENISON

Subjects 52-3 and 52-4 will be given in alternate years, and are designed for those who have completed Latin 52-2, or its equivalent. They may, by special arrangement with the instructor, be taken as half-subjects in either term.

- 52-5. Latin Composition. This course may accompany Latin 52-1 or be taken later in connection with other subjects offered by the department.

  One hour a week.

  PROFESSOR DENISON
- 52-6. Latin Composition. Latin 52-6 is open only to students who have completed Latin 52-5. In it particular attention is paid to idiom and style. By reason of the variation of the work from year to year, the subject may be taken a second time with due credit. One term hour. PROFESSOR DENISON

NOTE: —The attention of Greek and Latin students is called to related subjects listed under Classical History and Archæology.

#### 62 GREEK

# ASSISTANT PROFESSOR WYATT

\*62-1. Elementary. Goodwin's Grammar; Xenophon, Anabasis; Homer.

Assistant Professor Wyatt

Greek 62-1 is intended for students entering without Greek and wishing to begin the study of that language. It is assumed that their previous training in linguistic studies will enable them to proceed rapidly and accomplish in one year all the work usually done in preparation for college. This subject may be taken (without credit) as a normal course by advanced students, on consultation with the instructor. Double course, six hours a week.

**62-2.** Xenophon, Memorabilia; Homer, Odyssey; Euripides, one play.

Assistant Professor Wyatt

Greek 62-2 is for students who have passed Greek 1, or the entrance requirements in advanced Greek.

62-3. Herodotus, Books VII and VIII; Æschylus, The Persians; Sophocles, Antigone; Euripides, Alcestis; Plato, Apology, Protagoras, Phædo.

ASSISTANT PROFESSOR WYATT

[62-4. Lyric and Elegiac Poets, to Pindar. Aristophanes: Clouds, Birds, Acharnians, Frogs, with study of social life in Athens in the fifth century B. C.

ASSISTANT PROFESSOR WYATT]

[62-5. Theocritus, Idyls, with study of the Alexandrine age; Lucian; Homer, the Iliad, or the Odyssey, entire, with lectures on the results of the more recent investigations of the Homeric question.

ASSISTANT PROFESSOR WYATTI

Subjects 62-4 and 62-5 will be given in alternate years, and are designed for those who have completed Greek 62-3 or its equivalent. They may, by arrangement with the instructor, be taken as half-subjects in either term.

Note: —The authors and works enumerated under courses 62-2, 62-3, and 62-4 are not necessarily repeated each year, but are intended to give a general idea of the aim and scope of the courses.

62-6. Greek Composition; practice in sight reading. One hour a week.

Assistant Professor Wyatt

Greek 62-6 may be taken by any one who has had the equivalent of Greek 62-1.

[62-7. Greek Composition; reading at sight. One term hour.

Assistant Professor Wyatt]

Greek 62-7 is open only to students who have completed Greek 62-6.

NOTE: - No student can be recommended as a teacher of Greek who has not taken at least one subject in Greek composition.

#### 92 SPANISH

# Assistant Professor Reed

92-1. Elements of Spanish Grammar, practice in writing Spanish, reading of standard texts, including selections from the Don Quijote of Cervantes.

Assistant Professor Reed

The above subject alternates with 42-1 Italian. These subjects are open to candidates for A.B. who have done satisfactory work in French above intermediate grade.

#### 14 MATHEMATICS

# PROFESSORS WREN AND RANSOM

14-1. Introductory course. Rounded numbers, trigonometric functions, 4-place logarithms, right triangles. Graphical representation of functions, typical variables. Rectangular coördinates, straight lines, standard curves. Elementary derivatives, rate problems, extreme values. Simple integrals, areas.

PROFESSOR RANSOM, MR. H. RICE, and MR. L. H. RICE

- 14-5. (F) Elements of Calculus. Differentiation and integration of elementary algebraic and transcendental functions with simple applications.

  Mr. H. RICE
- 14-6.\* (F and s) Differential and Integral Calculus. A continuation of course 14-5, involving application to mechanics and to the theory of plane curves, the determination of lengths, areas and volumes.

PROFESSOR RANSOM and MR. H. RICE

- [14-4. (F) Analytic Geometry. Coördinate systems. Properties of conic sections and higher plane curves. Introduction to three dimensional geometry.

  PROFESSOR RANSOM]
- 14-7. (s) Advanced Calculus. A more critical examination of fundamental methods and their extension to complex quantities. Partial differentiation, line and surface integrals, and the more notable definite integrals.

  Professor Ransom
- [14-8. (s) Modern Geometry. An advanced course in Plane Analytic Geometry involving analysis by means of homogeneous coördinates, interpreting imaginary and infinite elements, and introducing the elementary geometric transformations.

  PROFESSOR RANSOM of MR. L. H. RICE]
- 14-9. (F) Theory of Equations and Determinants. Transformation of equations; cubic and quartic equations; applications of substitution groups; classification of linear simultaneous equations; properties of determinants.

  MR. L. H. RICE
- 14-10. (s) Differential Equations. A problem course in the elementary theory of ordinary and partial differential equations with applications to geometry and mechanics.
  PROFESSOR WREN
- 14-12. (F) Vector Analysis. Sums and products; differential operators; applications to geometry, electricity, and dynamics. PROFESSOR RANSOM

Mathematics 14-12 is open to students who have completed Mathematics 14-1, 14-5, and 14-6.

14-14. (F) Theoretical Mechanics. A problem course dealing mainly with dynamics of a particle, and dynamics of a rigid body. Lectures and recitations. Mathematics 14-6 and 14-10 must precede.

ASSISTANT PROFESSOR MARVIN

14-22. (For s) Algebra, geometry, and trigonometry. Parts of these subjects will be selected with especial reference to the needs of those intending to teach.

PROFESSOR RANSOM

Not open to Freshmen.

<sup>\*</sup> After 1917-18 in second term only.

#### 24 PHYSICS

#### PROFESSOR MARVIN

\*24-1. General Physics. An introductory course of lectures, recitations and laboratory work. It is to be elected by students who choose Physics as their prescribed science and who have presented Physics for admission. Two lectures or recitations and one three-hour laboratory period per week.

PROFESSOR MARVIN and MR. KNIGHT

Must be preceded or accompanied by Mathematics 14-21.

24-20. General Physics. A course of lectures, recitations and laboratory work intended to acquaint the student with the fundamental principles of Physics. This subject is to be elected by students who have not presented Physics for admission. Three lectures or recitations and one three-hour laboratory period. Eight term hours.

#### PROFESSOR MARVIN and MR. KNIGHT

- 24-21. Advanced General Physics. The course consists of problems in Mechanics, Heat, Light, and Electricity, with special emphasis on the Gas Laws and other topics introductory to Physical Chemistry. Preparation Physics 24-1 or 24-20. Two recitations per week. Four term hours. MR. POTE
- 24-7. Physics Laboratory. A laboratory course in General Physics intended to follow Physics 24-1 or 24-20. The course is designed to present to the student those physical processes and measurements which are of fundamental importance in scientific and technical work. One two hour period with one hour preparation per week. Two term hours.

Mr. Pote and Mr. Knight

- 24-2. (F) Electricity and Magnetism. A mathematical treatment of the electric field, the magnetic field, the electric current, electromagnetics, and the electromagnetic field, with a brief discussion of the generation and detection of electric waves. Lectures and recitations. *Preparation Mathematics 14-5*.

  PROFESSOR MARVIN
- 24-6. (s) Wave Motion and Light. A brief treatment of geometrical Optics is followed by a discussion of reflection, refraction, diffraction, interference, polarization, double refraction, emission and absorption from the standpoint of the wave theory. Lectures and recitations. Mathematics 14-5 must precede.

  PROFESSOR MARVIN
- 24-9. (s) Theory of Heat. A discussion of the classical experiments of Regnault, Joule and others, is followed by an introduction to the Kinetic Theory and Thermodynamics, and a discussion of recent developments in the field of Radiation. Lectures and recitations. Preparation Mathematics 14-5.

  MR. POTE
- 24-11. (F) Conduction of Electricity through Gases, and Radioactivity. Lectures and recitations, with collateral reading. Reports on original

papers appearing in the literature of the subject are required from time to time. Preparation Mathematics 14-5.

MR. POTE

24-17. Advanced Physics Laboratory. A course intended to accompany Physics 24-2, 24-6, 24-9, or 24-11. Open to Juniors and Seniors whose major department is Physics, and to other Juniors and Seniors whose qualifications are satisfactory to the head of the department. The course may be pursued for one, two, three or four terms, subject to the approval of the head of the department. One three hour period per week. Counting as one to four term hours, according to the number of terms in which it is pursued.

PROFESSOR MARVIN and MR. POTE

Mathematics 14 may be counted towards a major in Physics.

#### 34 CHEMISTRY

# PROFESSOR DURKEE

\*34-1. General Chemistry. A course in theoretical and descriptive inorganic chemistry, with a thorough consideration of the simplest carbon compounds and principal technical processes. This subject is to be elected by those who have presented Chemistry for admission. Two lectures, and one three-hour laboratory period. Six term hours.

PROFESSOR DURKEE, Mr. BAKER, Dr. CHANDLER, and Mr. POULEUR

34-20. General Chemistry. An introductory course in theoretical and descriptive inorganic chemistry, with a thorough consideration of the simplest carbon compounds and principal chemical processes. This subject is to be elected by those who have not presented Chemistry for admission. Three lectures or recitations, and one three-hour laboratory period. Eight term hours.

PROFESSOR DURKEE, MR. BAKER, DR. CHANDLER, and Mr. POULEUR

- 35-2. (F) Qualitative Analysis for the detection of the metals, a course which includes the experimental development of schemes for the division of the metals into groups, the separation and detection of the metals in each group,—a study of all the chemical changes and analytical details, together with the correct analysis of six known solutions and thirteen unknown. Lectures, laboratory work and recitations. Two three-hour periods.

  Two term hours. Professor Durkee, Mr. Baker, and Assistants
- 35-3. (s) Qualitative Analysis. Advanced, dealing with methods to effect solution of solids, the detection of mineral and common organic acids, the complete analysis of inorganic solids, including mixtures of salts, minerals, alloys, and slags. Three known and thirteen unknown are required, and thorough study of the chemical changes and conditions involved in the analyses. Lectures, laboratory work, and recitations. Two three-hour periods. Two term hours.

  MR. BAKER and ASSISTANT

34-22. Qualitative Analysis. A more extended treatment than that given in 35-2 and 35-3. Preparation 34-1. Open to all who are not engineering, or B.S. in chemistry students. Lectures, recitations, and laboratory work. Three three-hour periods. Six term hours.

PROFESSOR DURKEE and MR. BAKER

34-4. Quantitative Analysis. Theory and practice of gravimetric and volumetric analysis, including the determination of chlorine by the ordinary and Gooch crucible methods, iron and sulphur in furous ammonium sulphate, silica in a silicate, phosphorus in a phosphate, complete analysis of dolomite, and brass, preparation of strictly half-normal sodium hydroxide and hydrochloric acid solutions, the volumetric analyses of soda ash and oxalic acid, the analysis of iron ore by the dichromate and permanganate methods, determination of chromium in chromite, of antimony by the iodine method, and silver by the sulphocyanate method. Lectures and laboratory work. Three three-hour periods. Six term hours.

PROFESSOR DURKEE and MR. BAKER

- 34-5. Quantitative Analysis. Technical. Work varied somewhat to meet the needs of individual students. Course ordinarily comprises proximate analysis of coal, nitrogen in coal, by Kjeldahl's method, complete analysis of boiler scale, mineral and sanitary analysis of water, determination of copper in ores by iodine aud cyanide methods, of zinc by ferro-cyanide method, complete analysis of Babbitt metal, determination of lead in ores, and manganese, sulphur, phosphorus, silicon and carbon in iron and steel. Organic analysis. Laboratory work. Three three-hour periods. Six term hours.
- 34-7. (s) Fire Assay. A course which deals with the theory and practice of sampling and assaying gold and silver ores. Open to students who have taken 34-1, 34-2, 34-3, and 34-4. Two three-hour periods. Two term hours.

  PROFESSOR DURKEE, MR. BAKER, and MR. POULEUR
- 34-8. (s) Metallurgy of Iron and Steel, considered largely from the chemical side and includes the study of ores, fluxes, fuels, furnaces, and the other mechanical devices used in the commercial production of pig iron, wrought iron, and steel, together with the solution theory of iron and steel, heat treatment of steel, and production of malleable cast iron. Metallurgy of Gold and Silver is an alternative. Lectures, recitations, and laboratory work. Chemistry 34-8 is open to students who have taken Chemistry 34-1. Two lectures a week. Two term hours.

  MR. BAKER
- 34-9. (F) Gas Analysis, by the Orsat, Elliot, and Hempel systems. Lectures and laboratory work. Chemistry 9 is open to students who have taken Chemistry 34-1, 34-2, 34-3, and 34-4. One three-hour period. One term hour.

  MR. POULEUR

35-10. Organic Chemistry. This course consists of lectures, recitations, and laboratory work. It is intended to familiarize the student with the typical compounds of carbon and their more important derivatives. The work in the laboratory includes the preparation of certain of the more important substances referred to in the lectures, and the identification of certain classes of compounds. Lectures, recitations, and laboratory work. Chemistry 35-10 is open to students who have taken Chemistry 34-1. Three lectures and one three-hour laboratory period. Eight term hours.

DR. CHANDLER and ASSISTANT

- 34-II. Physical Chemistry. The subject matter of this course consists largely of the principles usually included under the head of Physical Chemistry. The work in the laboratory consists of physical chemical measurements and experiments of a physical chemical nature. Lectures, recitations, and laboratory work. Chemistry 34-II is open to students who have taken Chemistry 34-I, 34-2, and 34-4. Two lectures and one three-hour laboratory period. Six term hours.

  DR. CHANDLER
- 34-12. (F) Discussion of Chemical Subjects and Recent Investigations.

  One hour a week.

  PROFESSOR DURKEE and DR. CHANDLER
- 34-17. Applied Chemistry. A course dealing with the most important applications of inorganic and organic chemistry to manufacturing purposes, such as the production of sulphuric acid, soda, illuminating gas, and sugar. Lectures, visits to plants, text-book work, and recitations. Two lectures or recitations and one three-hour laboratory period. Six term hours.

PROFESSOR DURKEE

34-16. Thesis. Investigation of a problem in Inorganic, Organic, or Technical Chemistry. Open to students of A.B. and Science Courses who have satisfactorily completed Chemistry 34-1, 34-2, 34-3, 35-4, 34-5, and 35-10. *Nine laboratory hours a week.* Six term hours.

PROFESSOR DURKEE and DR. CHANDLER

34-19. (F) Chemistry. This course is primarily intended to enable the students to acquire facility in reading chemical German. The work consists of recitations and special reports on assigned subjects. These assignments are chiefly to articles in the German chemical journals. Open to Juniors and Seniors, candidates for A.B. or B.S., taking chemistry as a major subject, who have had not less than two years of college German or its equivalent.

Dr. Chandler

#### 44 BIOLOGY

#### PROFESSORS NEAL AND LAMBERT

\*44-1. General Biology. A course in the principles of animal and plant biology, presenting the fundamental facts of vital structure and function with special emphasis upon the vertebrates and flowering plants. Some

conception of the evolution of plants and animals is given by the laboratory study of a series of types beginning with the unicellular. The student is advised to take field work in ornithology (Biology 44-13) in conjunction with Biology 44-1. Two recitations and three hours of laboratory work. Six term hours.

PROFESSORS NEAL and LAMBERT

- 44-3. Vertebrate Morphology. A course in the phylogeny of man and mammals. The laboratory work consists largely of the dissection of the dogfish and cat. Each organ system is studied with reference to its development, anatomy and physiology. Open to all students who have completed Biology 44-1. Two lectures or recitations and three hours of laboratory work. Six term hours.

  PROFESSOR NEAL
- 44-4m. (s) Human and Comparative Physiology. Lectures, recitations, conferences, and laboratory work. Given at the Medical School. *Hours and credit to be arranged*.

  Dr. RYAN
- 44-5m. (F) Histology, Medical. Lectures, quizzes, and laboratory work given at the Medical School. Hours and credit to be arranged.

PROFESSOR BATES

- 44-7. Botany. Lectures and laboratory work. An advanced course in plant morphology and physiology, open to students who have taken Biology 44-1. Two lectures and three hours of laboratory work. Six term hours.

  PROFESSOR LAMBERT
- 44-8. Special Work. The investigation of some problem. Open to those who have taken three courses in biology. Hours and credits to be arranged.

  PROFESSORS NEAL and LAMBERT
- 44-9m. (F) Human Anatomy. Lectures, quizzes, and dissection. Given at the Medical School. Hours and credit to be arranged. Dr. Sullivan
- 44-II. Microscopical Technique. A laboratory course designed to introduce the student to the methods used in the preparation of plant and animal tissues for the microscope. Open to students who have completed Biology 44-3 or 44-7. Six hours of laboratory work. Four term hours.

PROFESSOR LAMBERT

44-12. Theoretical Biology. A reference reading and thesis course designed to introduce the student to some of the more important literature dealing with the scientific and philosophical problem of man's place in nature. A thesis based upon reference reading and dealing with the problem of the physical and mental evolution of man is required. Open to Seniors and Juniors but may not be offered as a part of the science requirement for a degree. One lecture, one conference hour and four hours of reference reading. Six term hours.

PROFESSOR NEAL

44-13. (s) Ornithology. A field and laboratory course in the study of our native birds. To be taken in conjunction with Biology 44-1. One three hour laboratory period or field trip a week. One term hour.

PROFESSOR NEAL

## 54 GEOLOGY

## PROFESSOR LANE

- 54-1. (s) Physical Geology and Geography. Primarily intended for Jackson students who may wish to teach Physical Geography in high schools, but there is also room for engineering students who cannot find place for 54-5 and 54-23 and 54-24. The text-books are Tarr (New Physical Geography) and Tarr & Von Engeln (Laboratory Manual of Physical Geography). A few lectures in geology will be given. Three periods a week and seven required Saturday afternoon excursions.
- 54-5. (F) Physical Geology. A study of the processes which have left their records on the earth. Frequent excursions. Wednesday 5, 6, 7, 8 and Friday 6.

  PROFESSOR LANE

A knowledge of Chemistry, Physics and Trigonometry is presupposed.

- 54-23. (s) Economic Geology. The various natural sources of supply for man's needs and the economic and geologic principles governing their valuation and development. The instruction is chiefly by lectures and the work is mainly collateral reading. This subject is best taken with 54-24 and preceded by some course in Geology or Mineralogy. One period a week. One term hour.

  PROFESSOR LANE
- 54-24. (s) Historical Geology. A study of the geological periods, with field excursions and laboratory work on fossils. Wednesday 5, 6, 7, 8 and Friday 6. Two term hours.

Geology 54-1 or 54-5 must precede; Biology 44-1 is helpful.

- [54-3. Mathematical Problems presented to geologists. Conferences and critical reading of selected papers and original work. Mathematics 4 must precede Geology 54-3; Mathematics 14-6 must precede or accompany it.

  Three term hours each half-year. Professor Lane]
- [54-4. Field Geology. Conference, one hour; field work, six hours a week; open to students who have taken Geology 54-24. First part of first and last part of second half-year. Three term hours.

PROFESSOR LANE

# 64 MINERALOGY

#### PROFESSOR LANE

Professor Lane would be glad to advise students wishing to take a thesis subject in Chemistry or Mathematics of geological, mineralogical or crystallographic interest.

- 64-1. (F) Mineralogy and Lithology. Open to students who have taken Chemistry 34-1. Two recitations and four hours of laboratory work or excursion. Counting as three term hours.

  PROFESSOR LANE
- [64-2. (s) Crystallography and Advanced Mineralogy. Open to students who have taken Mineralogy 64-1. Two lectures and four hours laboratory work and field excursions. Counting as three term hours.

PROFESSOR LANE

#### 16 PHILOSOPHY

# PROFESSOR SCHMIDT

- 16-1. (F) Introduction to Philosophy. The course attempts to give the beginner in philosophy a perspective of what philosophy is about and what kind of help it may give him.

  PROFESSOR SCHMIDT
  - 16-2. (s) Introduction to Philosophy. A continuation of the preceding.

    PROFESSOR SCHMIDT
- 16-3. (F) Logic. An elementary exposition of logic, in the modern sense of the word, of critique of cognition, structure of systems, and scientific methods.

  PROFESSOR SCHMIDT
- 16-4. (s) Logic. The "new" logic. An introduction to the calculus of classes and propositions; with applications. This course presupposes Philosophy 16-3.

  PROFESSOR SCHMIDT
- 16-55. Psychology. An elementary lecture course. Normal human psychology will form the main subject of the course; but abnormal and supernormal phenomena will be studied in so far as they shed light on normal psychology. Lectures, illustrative experiments, conferences.

PROFESSOR SCHMIDT

- [16-8. Ethics. A critical survey of the evolution of ethical ideals, followed by a constructive theory. But the main emphasis of the course will be laid on the application of the theory to the problems of the modern world of action,

  PROFESSOR SCHMIDT]
- [16-16. (F) Experimental Psychology. An elementary laboratory course; open only to those who either have finished or are taking the course in General Psychology (16-55). Nine hours of laboratory work counting for three term hours.

  Professor Schmidt]

#### 26 EDUCATION

#### PROFESSOR SCHMIDT

16-55. Psychology. This course is listed in the Department of Philosophy. It is recommended that students who expect to teach take this course during the Sophomore year, as it is required for all courses in Education except 26-1.

- 26-1. (F) Principles of Education. Brief introductory study of the Educational Reformers.

  PROFESSOR SCHMIDT
- [26-2. (s) Child Study. Child psychology; the relation of the school to child welfare including a discussion of such problems as school hygiene, backward children, juvenile delinquents and public play grounds; principles of moral and religious education.

  Professor Schmidt
- **26-4.** (s) Educational Psychology. A study of the application of psychology to the problems of education. Professor Schmidt

This course may be taken during the second term of the year in which the course in General Psychology 16-55, is taken.

26-5. (F) Principles of Secondary Education. Mr. Shaw

This course presupposes 26-1 and 26-4; it is meant primarily for those who expect to make secondary-school teaching their profession.

- [26-6. (s) Principles of Secondary Education (continued). Mr. SHAW]
- 26-7. (s) Practice Teaching. Teaching under supervision in the schools of Arlington, Medford, Somerville, Chelsea and Winchester. Only students who have finished 26-5 will be permitted to take this course. No student will be recommended by the Department of Education for a teaching position, unless he has shown teaching ability in the course in practice teaching.

Mr. SHAW

#### 36 HISTORY

#### Professor Andrews

\*36-1. The introductory course, designed to give a comprehensive view of the various political, religious, industrial, and social factors that have contributed to the Europe of today, and thus to pave the way for a more detailed study of limited periods. The field is in medieval and modern European history and emphasis is distinctly on the modern period. Text-books, lectures, assigned reading and thesis.

PROFESSOR ANDREWS

Students desiring to take as many subjects as possible in the department should elect History 36-1 and 36-2 early in their course. In History 36-9, 36-11, and 36-15 a reading knowledge of French is useful.

- **36-2.** General History of England. Text-book, lectures, analyses, and themes.

  PROFESSOR BOLLES
- 36-3. General History of America. Text-book, lectures, analyses, and themes.

  PROFESSOR BOLLES
- 36-9. The History of Eastern Europe from the earliest times to the present day. This subject includes the history, religions, institutions, and political and economic conditions of the countries and peoples of the

Nearer East, including, especially, Russia, Poland and other Slavic nations, the Byzantine Empire, the Balkan States and the Ottoman Empire, with some attention to Asia Minor, Egypt and Northern Africa. Lectures, discussions, assigned reading and thesis.

PROFESSOR ANDREWS

The second half-year may be taken separately by special permission of the instructor.

[36-11. Recent European History. Europe from the period of the French Revolution to the Outbreak of the War in 1914, including the formation and development of the present European governments and a study of international relations.

PROFESSOR ANDREWS]

The second half-year may be taken separately by special permission of the instructor.

36-15. Pro-Seminar in History and Public Law. Investigation of selected topics from the sources. During the year 1917-18 the subject of study will be a comparison of political and economic conditions in Latin America, Russia, and the Far East. History 36-15 is open only to such students as receive the special permission of the instructor. Hours and credit to be arranged with the instructor.

Professor Andrews

#### 46 PUBLIC LAW AND ADMINISTRATION

## Professor Andrews

46-r. (F) Political Institutions of the United States—Federal, State, and Municipal. The framework of American government is studied but emphasis is placed upon its actual working as modified by usage and existing conditions. Political parties, their place and development will be given due emphasis. Attempts will be made to study at close range the machinery of state and local legislative bodies. Each student will be given an opportunity to report on the governmental conditions in the locality with which he is most familiar. Text-book, lectures, discussions and thesis.

PROFESSOR ANDREWS

History 36-1 should precede or accompany any subject in Public Law but students may be admitted to classes by special permission of the department. Students desiring to take all the subjects in this group should elect History 36-1 in their first year, and Public Law 46-1, or its alternate, in their second year.

46-3. (s) Modern English Government. Detailed study of the actual working of the English government. Attention will be given to the procedure of Parliament and its relation to the executive, to the administrative structure, the organization and influence of political parties, and colonial relations. Comparisons with American and Continental political conditions will be attempted. Text-book, lectures, assigned reading, and thesis.

46-4. (F) European Government and Politics. A study of the constitutions of the chief European states, together with the consideration of the most important questions of European politics. A reading knowledge of French is desirable. Text-book, lectures, assigned reading, and thesis.

PROFESSOR ANDREWS

46-5. (S) Elements of International Law. Text-book, lectures, discussion, and assigned reading. Seniors and graduates only.

PROFESSOR ANDREWS

- [46-8. (s) Colonial Governments: The governments of colonies and dependencies throughout the world. Attention will be given to the history of modern colonization, to past and present experiments in administration, and to the international aspects of the colonial development of modern nations. Lectures, assigned reading and thesis. PROFESSOR ANDREWS]
- [46-10. International Law and Modern Diplomacy. The history of international law and consideration of its leading principles and practice.

  Cases in recent diplomatic procedure will be used. Textbook, lectures, discussions and assigned reading.

  PROFESSOR ANDREWS]

#### 66 POLITICAL SCIENCE

# PROFESSOR METCALF

\*66-1. Elements of Economics. (a) First semester: a consideration of the fundamental concepts of economics. The factors of production, exchange, distribution and consumption; the services of land, labor, capital and managerial ability; the laws of wages, rent, interest and profits. (b) Second semester: a study of present day economic problems. The corporation, trusts, railways, monopolies, tariff and free trade. The rise of the modern labor problem; types of labor unions, of employers' associations, of industrial peace agencies; woman labor and the minimum wage; child labor, industrial education and vocational guidance; mis- under- and unemployment; industrial accidents, occupational diseases, poverty and workingmen's insurance; profit-sharing, cooperation and welfare schemes. The effects of immigration on our economic, social and civic life; the beginnings, teachings and progress of modern socialism, its relation to trade unionism, syndicalism and anarchism. The relation of the State to industry. The aim of this course is to present economic and social movements and their underlying causes in such a way as to give to the non-specialist, whatever his future work may be, an intelligent understanding of current industrial problems and tendencies. Lectures, quizzes, text, assigned readings.

PROFESSOR METCALF

Economics 66-1, or its equivalent, is introductory to all the other subjects offered by the department.

- [66-2. (F) Modern Industrial History of Europe. A survey of existing industrial society in terms of development. The local industry of feudalism, the manorial and guild systems, the rise of nationalism, custom and competition, the effects of the Industrial Revolution on the development of technique, the separation of industrial functions, concentration of wealth, the growth of industrial institutions, and the theory of industrial change; the effects of the machine process upon social life and institutions. Lectures, text and assigned readings.

  PROFESSOR METCALF]
- [66-22. (s) Economic History of the United States. Brief consideration of economic conditions in the colonies; the growth of western settlement; economic relations growing out of slavery and the Civil War; study of the growth of agriculture, mining, manufacture, transportation and the resultant types of domestic and foreign commerce; brief survey of national legislation on currency, finance, taxation, including the tariff, together with its relation to industry and commerce. Lectures, text and assigned readings.

  Professor Metcalf
- 66-3. (F) Elements of Sociology. A general course in the foundations of sociology, including a survey of social origins, social evolution and some account of the prevailing types of social activities of present day society Methods of social control—law, belief, public opinion, social suggestion. Social organization, social ideals and theories of social progress. Lectures text, readings, discussion.

  PROFESSOR METCALF
- 66-13. (s) Social problems. A study of current problems in sociology: population, the family, child welfare, the woman movement; the assimilation of the foreign elements in American population; rural isolation and city, congestion; problems of poverty, delinquency and dependency. Movements for social betterment such as improved standards of living, housing, and civic recreation. Lectures, readings, discussion.

PROFESSOR METCALF

66-4. (F) Principles of Public Finance. Public expenditures; classification of public revenues; recent reforms in taxation; the development and significance of public debts; financial administration; recent European and American works on finance. Lectures, discussions, text.

MR. TUCKER

66-5. (s) Fiscal History of the United States: an historical course, with special reference to the financial experience of the United States. Leading topics are Hamilton's financial system; protection and revenue tariffs; the bank question; the fiscal policy of the Civil War; resumption of specie payments; the national banking system; state and local taxation; silver legislation and the panic of 1893; government loans; resumé of recent financial legislation. Lectures, discussions. text.

Mr. Tucker

66-6. (F) Modern Industrial Combinations. The economics of corporations with special reference to the so-called trust problem. Among the topics treated are trust promotion, capitalization, trusts and industrial efficiency, influence of combinations upon prices, profits, wages, rights of investors, international trade, industrial stability and business honor; the practical results attained through publicity, taxation, recent court decisions and State regulation. Lectures, recitations, reports, text.

PROFESSOR METCALF

- 66-16. (s) Modern Labor Problems. This subject deals mainly with the social and economic problems arising from the relations of employers and their laborers. The chief topics will be the growth, methods and aims of modern associations of wage earners; methods of conciliation and arbitration; strike and factory legislation; employers' liability and recent compensation acts; compulsory publicity; provident institutions and friendly societies; the relation between trade unions and scientific management. Each member of the class will be expected to make a report upon a labor union. Lectures and recitations, text.

  Professor Metcalf
- 66-17. Business Organization and Administration. This course treats of the various types of business organization, management and administration; plant equipment; problems of internal organization; modern business practice in selecting, placing and training employees; methods of remuneration and promotion; just relations between employer and employee. A critique of the various efficiency systems, with special reference to the principles and practice of scientific management, their scope, application, economic and social results. The ideal business administrator. The place of vocational guidance in the field of business and industry. Students desiring to prepare for executive and administrative positions will find this course of particular assistance. Lectures, discussions, and reports.

PROFESSOR METCALE

Either half-year may be taken as a half-subject.

- 66-19. (F) Transportation Problems. The economic, financial and social problems arising from modern systems of transportation, with special reference to railway transportation, in the United States. The chief topics are: brief historic survey of water and railway transportation; railway charters, powers of directors and stockholders, the nature of railway securities; railway traffic; fares, rate making, rebates, pooling and railway consolidations; the American systems of State railway commissions, the Interstate Commerce Commission, the recent extensions of Federal control; the effects of transportation systems upon industrial competition. Lectures and recitations.
- **66-20.** (S) Immigration. A study of immigration into the United States, the racial elements represented and their geographical distribution;

the effects of immigration upon our economic and social life and the influence of America upon the newcomer; the history of restrictive legislation and the arrangements provided for the care of aliens.

MR. TUCKER

66-7. (s) The History of Economics: an account of the beginnings, the progress, and the various schools of economic science; study of the writings of Adam Smith, Ricardo, Mill and others. Political Science 66-7 is open to advanced students who are specializing in the department. A reading knowledge of French and German is desirable.

PROFESSOR METCALF

This course is open to graduate students only.

66-9. Seminar in Economics and Sociology, designed for advanced students who are specializing in the department. Questions in economics, statistics or sociology may be selected. Hours and credit to be arranged.

PROFESSOR METCALE

### 18 ORATORY

### ASSISTANT PROFESSOR GILMER

- 18-1. (s) The Principles of Oratory. Enunciation and pronunciation; attitude and gesture; declamation; delivering of speeches, extempore and prepared; final original oration.
  Assistant Professor Gilmer
- 18-2. (F) Argumentation and Debate. Impromptu and prepared debate. Individual criticism.

  Assistant Professor Gilmer

#### 28 CLASSICAL HISTORY AND ARCHÆOLOGY

### PROFESSOR DENISON AND ASSISTANT PROFESSOR WYATT

[28-1. (F) Greek and Roman Architecture. In this course a special effort will be made to trace the influence of Greek and Roman Architecture on the architecture of subsequent periods, particularly of our own time; and also to treat later styles sufficiently to make clear fundamental differences and inspire the student to further reading and study.

PROFESSOR DENISON]

The instruction in this and the following courses will be by means of lectures, class reports and lantern slides.

- [28-2. (s) Greek and Roman Sculpture. The twofold purpose of this course is, to inspire in the student a love for the beautiful, and to enable him to gain some understanding of the bases of present-day art and the principles of its interpretation.

  Assistant Professor Wyatt]
  - 28-3. (F) Roman Private Life. Professor Denison
- [28-4. (s) Greek Private Life. Assistant Professor Wyatt] In subjects 28-3 and 28-4 there will be systematic treatment of such topics as birth, education, marriage, death, the house, furniture, dress, meals, amusements, careers and occupations.

- [28-5. (F) Roman Religion and Public Life. In this course special stress will be laid on the Roman Religion, but there will be systematic study of other topics such as the topography of Rome, political, legal and military institutions, measures and money, books, inscriptions, chronology and calendar.

  PROFESSOR DENISON
- 28-6. (s) Greek Mythology and Religion. The underlying principles of Greek religion will be considered. The Myths will be treated in their relation to ancient and modern literature and art. Textbook (Fairbanks, Greek Mythology).

  Assistant Professor Wyatt
- 28-7. (F) Greek History; from the earliest times to the death of Alexander, with consideration of the sources. Textbook (Bury).

ASSISTANT PROFESSOR WYATT

28-8. (s) History of Rome; from the beginnings of the city to the Fall of the Western Empire, with study of the sources. PROFESSOR DENISON

#### 38 MUSIC

### PROFESSOR LEWIS

38-9. (F) Musical Appreciation, Elementary. Systematic studies in musical essentials from the listener's standpoint.

PROFESSOR LEWIS

For Music 38-9 no technical preparation is requisite, but ability to recognize a melody is presupposed. Ability to follow a piano score is very helpful. Outside reading and laboratory study with automatic instruments are required. Music 38-9 is given in Tufts and Jackson in alternate years. In 1917–1918 it is given in Tufts.

- **38-10.** (s) Musical Appreciation, Intermediate. A continuation of Music 38-9. Professor Lewis
- [38-1. (F) Elements of Theory. Lectures, practice, and analysis, with various text-books for reference.

  Professor Lewis]

Only acquaintance with musical notation and with the piano keyboard is required. Music 38-1 is introductory to Music 38-21.

[38-21. (s) Harmony. Lectures and practical work, based on Chadwick's Manual of Harmony; collateral reading on biography and theory.

Professor Lewis]

**38-22.** (F) Advanced Harmony and Elementary Counterpoint. A continuation of Music 38-21. Professor Lewis

A full equivalent of Music 38-1 and 38-21 must have been done by students who wish to begin their college work with Music 38-22.

[38-3. (s) Sight-reading in Song, and Harmonic Analysis.

PROFESSOR LEWIS

Only those who have finished Music 38-22 may take Music 38-3. The harmonic analysis begun in Music 38-22 is continued, with special attention to the problems of modern music. Harmonic Analysis, by B. Cutter, and Melodia, by Cole and Lewis, are the text-books.

38-24. (s) Counterpoint. Lectures and practical work, based on the manuals of Goetschius, Spalding, and others; collateral reading on biography and theory.

PROFESSOR LEWIS

Laboratory work with the automatic instruments is required.

- [38-6. (s) General History of Music, from the earliest times to the present day, with special attention to the period since the death of Palestrina.

  Lectures, with various treatises for reference.

  PROFESSOR LEWIS
- [38-25. Studies in one or more of the following subjects: Canon, Fugue, Orchestration, Form, Free composition, Musical History, Musical Criticism.

  PROFESSOR LEWIS]

The studies may be directed by lectures, or may consist of individual work of students under the supervision of the instructor. Requirements as to previous studies in Music and in foreign languages will be given on application to the instructor.

### 88 PHYSICAL TRAINING

### THOMAS J. CONNOR, Director

The aim of the department is to secure the interest and participation of the students in such exercises and training as they need for corrective, hygienic, and recreative purposes.

Lectures on anatomy, physiology, and personal hygiene are given during the second term of the Freshman year. Regular class exercises in the gymnasium during the winter, and outdoor exercise in the fall and spring, are required two hours a week of all undergraduate students, for the first two years following admission to college. A medical examination is given and physical measurements and strength tests of all students are taken.

#### THEOLOGY

All the subjects offered in the Theological School are open to election by qualified students in the School of Liberal Arts.

## Time-Schedule for 1917-18

(Subject to Revision)

SCHOOL OF LIBERAL ARTS AND JACKSON COLLEGE

Initials are used for the days of the week. The numeral following these letters indicates the program-hour, not the time of day. The working day is divided into nine periods as follows:

	•		_
I	8.00	6	2.10
2	8.50	7	3.10
3	9.50	8	4.10
4	11.10	9	5.10
5	12.10		

Thus MWF 2 means Monday, Wednesday and Friday at 8.50; TTS 4 means Tuesday, Thursday and Saturday at 11.10.

(F) indicates that the subject is offered for the first half-year only. All subjects not so indicated extend through both terms.

The hour for the Tufts division is indicated by the letter T; for the Jackson division by J. All subjects not so indicated are open to students of both colleges.

For description of the subjects, students are referred to the departmental statements in the catalogue.

- 12-1 (F) English T MWF 3 or TTS 3; J MWF 2 or 4
- 12-2 (s) English T MWF3 or TTS 3; J MWF2 or 4
- 12-4 (s) English TTS 3
- 12-10 English TTS 3
- 12-11 English MWF 5
  12-12 English MWF 2
- 12-13 (s) English TTS 5
- 12-17 (F) English MWF 3
- 12-18 (s) English MWF 2
- 12-23 (F) English MF 78
- 12-24 (F) English TTS 2
- 12-25 English TTS 4
- 12-29 English Tu 67 Th 6
- 12-31 (s) English TTS 4
- 12-32 (s) English *TT7*12-36 (s) English *TTS 2*
- 14-1 Mathematics T MWF 2, 3 or 4 or TTS 2; J TTS 2 or 3
- 14-5 (F) Mathematics TTS 4
- 14-6 (F and s) Mathematics TTS 2
- 14-7 (s) Mathematics \*
- 14-9 (F) Mathematics TTS3

- 14-10 (s) Mathematics TTS2
- 14-12 (F) Mathematics \*
- 14-14 (F) Mathematics \*
- 14-22 (F or s) Mathematics \*
- 16-1 (F) Philosophy TTS 4
- 16-2 (s) Philosophy TTS4
- 16-3 (F) Philosophy MWF 4
- 16-4 (s) Philosophy MWF 4
- 16-55 Philosophy MWF 2
- 18-1 (s) Oratory MWF 4
- 18-2 (F) Oratory MWF4
- 22-1 German TTS 3
- 22-2 German TMWF2; JMWF3
- 22-3 German TMWF4; JMWF4
- 22-3B German TTS 4
- 22-4 German MWF 5
- 22-5 German TTS 5
- 24-1 Physics Tu S 4, Laboratory W Th or F 678
- 24-2 (F) Physics \*
- 24-6 (s) Physics\*
- 24-7 Physics W 123 or 678
- 24-11 (F) Physics \*
- 24-17 Physics \*

<sup>\*</sup> Hours to be arranged.

38-9 (F) Music T \* 38-10 (s) Music T\* 38-22 (F) Music Tu 6 Th 67

38-24 (s) Music \* 38-25 Music \*

44-1 Biology TT 6789 44-3 Biology MF 6789 44-7 Biology MF 6789 44-8 Biology \* 44-11 Biology MF 6789 44-12 Biology TT 5 44-13 (s) Biology S 1 46-1 (F) Public Law MWF ? 46-3 (s) Public Law MWF3 46-4 (F) Public Law MWF 4 46-5 (s) Public Law MWF4 52-1 Latin T TTS3; J TTS 4

52-2 Latin MWF3 52-3 Latin TTS 2 52-5 Latin \* 52-6 Latin \*

54-1 (s) Geology TTS 3 or 4 54-5 (F) Geology W 5678; F 6 54-23 (s) Geology W 5 54-24 (s) Geology W 678; F 6 62-1 Greek MWF 3; TTS 2

24-20 Physics TTS 4, Laboratory on W Th or F 678
24-21 Physics TT 5
26-1 (F) Education TTS I
26-4 (s) Education TTS I
26-5 (F) Education MWF I
26-7 (s) Education MWF 1
28-3 (F) Class. Arch. MWF 4
28-6 (s) Class. Arch. MWF 4
28-7 (F) Class. Arch. MWF 5
28-8 (s) Class. Arch. MWF 5
32-I French MWF 6
32-1A French *
32-2 French MWF 2
32-3 French T MWF4; J MWF6
32-3B French TTS 4
32-4 French TTS 2
32-5 French TTS 3
34-1 Chemistry TT5
Laboratory Tu or Th 678
34-4 Chemistry TTS 123
34-5 Chemistry TTS 123
34-7 (s) Chemistry WF 678 .
34-8 (s) Chemistry WF <sub>4</sub>
34-9 (F) Chemistry F 123
34-11 Chemistry MF 5; W 123
34-12 (F) Chemistry *
34-16 Chemistry *
34-17 Chemistry TT 8; M 123
34-19 (F) Chemistry *
34-20 Chemistry TTS 5
Laboratory Tu or Th 678
34-22 Chemistry MWF 123
35-2 (F) Chemistry MF 123 or 676
35-3 (s) Chemistry <i>MF</i> 678
35-10 Chemistry <i>TTS 5; M</i> or <i>W 678</i>
36-1 History MWF 5 or TTS 4
36-2 History TTS 4
36-3 History MWF 4
36-9 History TTS 5
-6 II:-+ *

<sup>62-2</sup> Greek TTS 5 62-3 Greek TTS 3 62-6 Greek \* 64-1 (F) Mineralogy M 45; TT 67 66-1 Pol. Science TTS 4 66-3 (F) Pol. Science MWF 2 66-4 (F) Pol. Science TTS3 66-5 (s) Pol. Science TTS3 66-6 (F) Pol. Science MWF3 66-7 (s) Pol. Science \* 66-9 Pol. Science \* 66-13 (s) Pol. Science MWF 2 66-16 (s) Pol. Science MWF3 66-17 Pol. Science TTS 3 66-19 (s) Pol. Science TTS 2 36-15 History \* 66-20 (s) Pol. Science TTS 2 \* Hours to be arranged. 92-1 Spanish MWF 6

# JACKSON COLLEGE FOR WOMEN

CAROLINE STODDER DAVIES, A.M., Dean

### Standing Committees

PROMOTIONS: Dean Davies, Chairman; Professors Fay, Metcalf, Neal and Schmidt.

STUDENT ORGANIZATIONS: Dean Davies, Chairman; Professors Fay and Gilmer.

## Faculty of Jackson College for Women

HERMON CAREY BUMPUS, Ph.D., Sc.D., LL.D. PRESIDENT

CAROLINE S. DAVIES, A.M. DEAN Professor of English

WILLIAM H. REED, A.M., RECORDING SECRETARY
Assistant Professor of Modern Languages

### Professors

Arranged in the order of their appointment at Tufts College

CHARLES E. FAY, A.M., LITT.D.

Wade Professor of Modern Languages

FRANK W. DURKEE, A.M. Chemistry

LEO R. LEWIS, A.M.

History and Theory of Music

FRANK G. WREN, A.M.

Walker Professor of Mathematics

FRED D. LAMBERT, Ph.D. Botany

WILLIAM K. DENISON, A.M.

Latin Language and Literature

HENRY C. METCALF, Ph.D.

Jackson Professor of Political Science

EDWIN C. BOLLES, Ph.D., D.D., LL.D.

Dickson Professor of English and American History

WILLIAM R. RANSOM, A.M.

Mathematics

ALFRED C. LANE, Ph.D., Sc.D.

Pearson Professor of Geology and Mineralogy

HENRY I. CUSHMAN, A.M., D.D.

HINCKLEY G. MITCHELL, D.D.

Hebrew and Old Testament Exegesis

ARTHUR I. ANDREWS, PH.D.

History and Public Law

KARL SCHMIDT, Ph.D.

Philosophy and Education

LEE S. McCOLLESTER, S.T.D.

Packard Professor of Christian Theology

HERBERT V. NEAL, Ph.D. Zoology

CLARENCE R. SKINNER, A.M.

Applied Christianity

CHARLES H. GRAY, Ph.D. English

HENRY H. MARVIN, Ph.D.

Physics

### Assistant Professors

Arranged in the order of their appointment at Tufts College

WILLIAM H. REED, A.M.

Modern Languages

ALBERT H. GILMER, A.M. English

WILLIAM F. WYATT, Ph.D.

Greek

### Instructors

CROSBY F. BAKER, M.S.

Chemistry

RUTH A. BASS

Physical Training

JOSEPH CHANDLER, Ph.D.

Organic Chemistry

JOHN L. C. KEEGEN, A.M. English

NATHANIEL H. KNIGHT, B.S.

Physics

FRANK W. POTE, B.S.

Physics

AUGUSTE L. POULEUR, M.S. Chemistry

HARRIS RICE, S.B.

Walker Special Instructor in Mathematics

LEPINE H. RICE, Ph.B.

Mathematics

EDWIN A. SHAW, M.S.

Education

DONALD S. TUCKER, A.M.

Political Science

### House Mistresses.

MRS. CAROLINE M. ROBINSON, A.B.

Head of Metcalf Hall

MISS RUTH A. BASS
Alpha House

Mrs. DOROTHY CHAMBERLAIN
Richardson House

MISS KATHERINE DOLBEAR, A.M.

Gamma House

Miss RUTH TOUSEY, A.B.

Delta House

## Jackson College for Women

Women are admitted to the courses of instruction given at Tufts College on the same terms as men. The Faculty of Jackson College for Women is the same as the Faculty of the School of Liberal Arts and in many cases, particularly in the sciences, the men and women attend classes in common and work in the same laboratories.

The buildings exclusively occupied by Jackson College are seven in number. Miner Hall contains the office of the Dean of Women, reception rooms and various classrooms. It is located near the College Library. Metcalf Hall is the principal dormitory, and contains the refectory; this building serves as a general headquarters for the women students, and its plan and furnishings are well adapted to this purpose. Alpha House, Richardson House, and Gamma House are smaller dormitories, each under the direct supervision of a resident house mistress. To secure more accommodation, Delta House has been opened on a co-operative basis. The students assume the running expenses and housekeeping duties. The Dean of Women resides in a cottage adjoining Metcalf Hall.

The women's gymnasium is a small building excellently equipped with apparatus. The main room is frequently used as an auditorium, as it contains a small stage well supplied with facilities for various dramatic activities.

The requirements for the degrees of A.B. or B.S. are the same as in Tufts College. All graduates of Jackson College receive the diploma of Tufts College.

### **EXPENSES**

The tuition charges and incidental expenses are the same as in the School of Liberal Arts, with the exception of the charge for Physical Training, which is ten dollars. Room rent in the several dormitories may be tabulated as follows; the prices given are the rate per student per term.

8.	Dormitor	ies for Wom	en		
Double Rooms					
	Metcalf	Richardson	Alpha	Total	
\$20.00	I			1	
22.50	2			2	
25.00		•	I	I	
27.50			I	I	
30.00	2	7	3	12	
37.50	4			4	
42.50	4			4	
Total Double Rooms	13	7	5	25	
Single Rooms					
\$20.00	I		I	2	
25.00	I			I	
30.00		4		4	
37.50	4			4	
Total Single Rooms	6	4	I	11	
Total	19	11	6	36	

Students are required to reside in the dormitories or with their families unless permitted by the Dean to make other arrangements.

All resident students, except those living in Delta House, board at Metcalf Hall.

The Bursar of the College receives all payments for board which is payable in advance.

For absences due to a student's illness and lasting more than one week, deduction will be made from the board bill.

### REGISTRATION

The conditions controlling admission to Jackson College are in general the same as those controlling admission to any of the associated schools and are given in detail in the earlier part of this publication. Those intending to enroll as students should make their intentions known to the Dean as early as possible.

### PHYSICAL TRAINING

### MISS BASS

This subject is required during the Freshman and Sophomore years for healthful recreation, corrective and hygienic purposes. A medical examination, including physical measurements, is given at the beginning and end of the course. Class exercise includes gymnasium work, æsthetic dancing and basket ball drill. Weekly lectures on Hygiene and Physiology are given during the first term in the Freshman year. Superintended outdoor sports are required during the spring and autumn; these include basket ball, tennis, volley ball and field hockey.

### SCHOLARSHIPS

In addition to the scholarships named below, with the amount of their endowments, a portion of the scholarship funds of Tufts college has been set apart for the students of Jackson College. Applications should be addressed to the Committee on Scholarships.

- The John and Lucy H. Stowe Scholarships. (5) \$10,000 Five scholarships for women students. Founded in 1894 and 1902 by Mrs. Lucy H. Stowe of Lawrence.
- THE MARY AND LUTHER GILBERT SCHOLARSHIPS. (2) \$4,000 Founded in 1902 and 1904 by Mrs. Mary G. Knight, of Roxbury, for the benefit of women.
- THE CHARLES A. AND CORNELIA B. SKINNER SCHOLARSHIP. \$1,000 Founded in 1907 by Rev. Charles A. Skinner, D.D., and Mrs. Cornelia B. Skinner, of Cambridge, Mass.
- THE ALPHA OMICRON PI PRIZE SCHOLARSHIP.

An annual gift of \$50, by the Alumnæ of the Tufts Chapter of Alpha Omicron Pi, and given to that woman in the senior class who shall have made the best record in the prescribed work of the A. B. Course.

THE ALPHA XI DELTA PRIZE SCHOLARSHIP.

An annual gift of \$50. by the Lambda Chapter and Alumnæ of Alpha Xi Delta and given annually to that senior who, at the end of the Junior year, shall have maintained the highest excellence in a course of study broadly and wisely chosen.

THE CHI OMEGA PRIZE SCHOLARSHIP.

An annual gift of \$50. by the Alumnæ of the Chi Alpha Chapter of Tufts College, to be given annually to a student of Jackson College who at the end of her Junior year has attained commendable scholarship in Economics and Sociology and has shown a keen interest in Social Service. The purpose of this scholarship is to encourage practical work during her Senior year.

THE BOSTON ALUMNÆ CHAPTER OF SIGMA KAPPA SCHOLARSHIP.

An annual gift of \$50. by the Boston Alumnæ Chapter of Sigma Kappa, representing Boston University and Jackson College, available at Boston University on the even year, beginning 1914, and at Jackson College on the odd year, to be given to a sorority or non-sorority girl, worthy in character and scholarship, who is struggling to meet the expenses of a college education.

### LOANS AND AIDS

The Woman's Universalist Missionary Society of Massachusetts maintains a fund for the use of students of Jackson College. The scholarships, which have a value of \$100, are restricted to Universalists. It is understood that the beneficiaries in due time will return an equivalent amount to the Fund.

The Hettie Lang Shuman Memorial Fund was founded in 1905 by Mr. A. Shuman, who presented one thousand dollars to the College, in memory of his wife. The interest of this fund is annually expended in aiding deserving women students.

# ENGINEERING SCHOOL

GARDNER CHACE ANTHONY, A.M., Sc.D., Dean

### Standing Committees

CURRICULUM: Dean Anthony, Chairman; Professors Hooper, Durkee, Sanborn, Seavey, Chase, and Rockwell.

PROMOTIONS: Dean Anthony, *Chairman*; Professors Ransom, Rockwell, and Assistant Professors Carroll and Conner.

## Faculty of the Engineering School

HERMON CAREY BUMPUS, Ph.D., Sc.D., LL.D., PRESIDENT

GARDNER C. ANTHONY, A.M., Sc.D., DEAN

Professor of Technical Drawing. Acting Head of Department of Mechanical Engineering

WILLIAM H. REED, A.M., SECRETARY

### Professors

Arranged in the order of their appointment at Tufts College.

WILLIAM L. HOOPER, A.M., Ph.D., LL.D. Electrical Engineering

FRANK W. DURKEE, A.M. Chemistry

CHARLES H. CHASE, S.B. Steam Engineering

HENRY C. METCALF, Ph.D.

Political Science

WILLIAM R. RANSOM, A.M.

Mathematics

FRANK B. SANBORN, C.E., M.S. Civil Engineering

EDWARD H. ROCKWELL, S.B. Structural Engineering

ALFRED C. LANE, A.M., Ph.D., Sc.D., Geology and Mineralogy

HENRY H. MARVIN, B.S., Ph.D. Physics

FRANK E. SEAVEY, A.M. English

#### Assistant Professors

Arranged in the order of their appointment at Tufts College.

\*EDWIN B. ROLLINS, B.S. Electrical Engineering

<sup>\*</sup> Absent on leave first semester.

MELVILLE S. MUNRO, B.S. Electrical Engineering

RICHARD C. SMITH, B.S. Structural Engineering

SAMUEL L. CONNER, M.S Railroad Engineering

HOWARD H. CARROLL, S.B. Technical Drawing.

VANNEVAR BUSH, M.S., Eng.D. Electrical Engineering

### Instructors

CONRAD A. ADAMS, B.S.

Mechanic Arts

CROSBY F. BAKER, M.S. Chemistry

HARRY P. BURDEN, B.S. Civil Engineering

JOSEPH CHANDLER, Ph.D. Organic Chemistry

SHIRLEY W. HARVEY, A.B. English

NATHANIEL H. KNIGHT, B.S. *Physics* 

ARTHUR W. LEIGHTON Drawing

EDGAR MACNAUGHTON, M.E. Mechanical Engineering

ETHEL MARR McCALLUM

English

CHARLES F. NEVENS, A.M.

Modern Languages

FRANK W. POTE, B.S. *Physics* 

AUGUSTE L. POULEUR, M.S. Chemistry

HARRIS RICE, S.B.

Walker Special Instructor in Mathematics

LEPINE H. RICE, PH.B.

Mathematics

DONALD S. TUCKER, A.M.

Political Science

### Courses of Instruction

The School offers courses leading to the degree of Bachelor of Science in Civil Engineering, Structural Engineering, Mechanical Engineering, Electrical Engineering, and Chemical Engineering.

During the first two years the course of study and elective privileges are the same for all departments. The importance of developing the power to write clear and concise English is emphasized by correlating this subject with the work of other departments, thus making it a fundamental subject for technical training. The subjects of Mathematics, Physics, Chemistry, Graphics and of Mechanic Arts, being common to every field of engineering, are required of all students. Introductory engineering courses in Heat, Electricity and Hydraulics are also given to all during the Sophomore year.

The more technical work of the Junior and Senior years is tabulated in the following pages under the headings of the respective departments.

On the pages immediately following the Outline of Courses will be found an index of the subjects, which also indicates the system of numbering.

Following this index is the detailed description of the subjects in numerical order.

### REQUIREMENTS FOR THE DEGREE

One hundred and forty term hours are required for graduation, this being the equivalent of about fifty-two hours of study, recitation, and laboratory hours per week. A grade of C or higher must be obtained in at least seventy term hours.

### RELATION OF THE SEVERAL DEPARTMENTS

Freshmen and Sophomore	Junior	Senior
	Civil and Structural  Mechanical and Electrical	Civil Structural Mechanical Electrical
	Chemical	Chemical

### OUTLINE OF COURSES

An index of the subjects, and key to the system of numbering may be found on the pages immediately following the Outline of Courses. Following the index are the details of the subjects in their numerical order.

### FRESHMAN YEAR

		[Alike for all cours		
	FIRST TERM	Term hour	Second Term	Term hour
11-1	English	3 11-2	English	3
13-2	†French or †German	3 13-2	†French or †German } · · · · ·	3
21-4	tGraphics or tGraphics	3 21-5		3
25-2	†Mechanic Arts / †Mechanic Arts /	25-3	†Mechanic Arts }	2
	†Mechanic Arts )	29-3	Mathematics	3
41-4	Surveying	2 31-31	Physics or { *Physics { · · · · · ·	} 3
88	Physical Training		Physics Laboratory Physical Training	· · · · · · · · · · · · · · · · · · ·
	Total	. 17½ or 18½	Total	

SOPHOMORE YEAR	
[Alike for all courses.]	
FIRST TERM SECOND TERM	
Term hour	Term hour
21-13 Mechanism	3
29-4 Mathematics	} 3
31-2 Physics or 335-20 *Chemistry \	4
31-9 Physics Laboratory 1½ 45-21 Mechanics	3
35-1 Chemistry or \ 3 61-20 Electrical Engineering .	3
35-20 *Chemistry (	1/2
51-1 Heat Engineering	15½ or 16½
Total 17 or 19	

Electives

English, French or German.

†As the courses to be pursued in Modern Language, Graphics and Mechanic Arts are dependent on the preparation of each student, definite instruction for the selection thereof is given at the time of registration.

Electives

English, French or German.

<sup>\*</sup>Required of those not having one unit entrance credit in the subject.

### JUNIOR YEAR

### CIVIL AND STRUCTURAL ENGINEERING

	CIVIL AND STRUCTU	RAL	ENGINEERING
	FIRST TERM Term hour		SECOND TERM Term hour
35-2	Qualitative Analysis 2	29-5	Mathematics 3
41-12	Railroad Surveying 3 Water Supplies 3	41-13	Railroad Engineering 3 Highways 2
41-46	Applied Mechanics 3	41-21	Highways 2 Hydraulic Measurements 2
45-I 45-I2	Applied Mechanics Laboratory . 1	45-2	Applied Mechanics 3
81-1	Economics 3	47-3	Structural Design 3
	Total		Total
	Electives		Electives English
II-	English	11- 17-1	C
14- 17-1	Spanish 3	41-31	
54-	Geology	41-51	Fire Prevention
64-1	Mineralogy and Lithology 3	-	Geology
	MECHANICAL AND ELEC	CTRIC.	AL ENGINEERING
	FIRST TERM Term hour		SECOND TERM
	Oualitive Analysis 2	25-8	Mechanic Arts
35-2 45-1	Applied Mechanics 3	29-5	Mathematics
45-12	Applied Mechanics Laboratory . 1	45-4	Applied Mechanics 3
51-24	Mechanical Engineering Lab 3	51-3	Heat Engineering 3
61-3	Dynamo-Electric Machinery 3	61-5	Alt. Current Machinery 3
81-1	Economics 3	61-8	Electrical Laboratory 3
	Total 15		Total
	Electives		Electives
II-	English	II-	English
14-	Mathematics	14-	Mathematics
17-1	Spanish 3	17-1	Spanish 3
	CHEMICAL E	NGINI	EERING
	First Term		SECOND TERM
	Term hour		Term hour
35-2	Qualitative Analysis 2	29-5	Mathematics 3
35-4	Quantitative Analysis 3	35-3	Qualitative Analysis 2
35-10	Organic Chemistry 4	35-4	Quantitative Analysis 3
45-1	Applied Mechanics 3	35-10	Organic Chemistry 4
45-12 81-1	Applied Mechanics Laboratory . 1	45-2	Applied Mechanics 3
01-1	Economics 3		Total 15
	Total		
	Electives		Electives
11-	English	XX-	English
17-1	Spanish	17-1	Spanish 3
64-1-	Electricity and Magnetism 3 Mineralogy and Lithology 3		German 15 or 22
34-1	German 15 or 22		

### SENIOR YEAR

### CIVIL ENGINEERING

SECOND TERM

Term hour	Term ho r
STRUCTURAL	Engineering
*41-46 Water Supplies	SECOND TERM   Term hour   47-2   Theory of Structures
Electives	Electives

<sup>\*</sup> Omit from Senior year after 1917-18

FIRST TERM

### SENIOR YEAR

### MECHANICAL ENGINEERING

			G E
	FIRST TERM Term hour		SECOND TERM Term hour
		51-8	Dower Plant Dorige
51-7	Engine Design 3	51-18	Power Plant Design 3 Machine Design 3
51-15	Dynamics of Machinery 3 Machine Design 3	51-28	Mechanical Engineering Lab. 3
51-18	Mechanical Engineering Lab 3	51-99	Thesis
71-2	Military Engineering 3	51-99	111035
71-2			The seal of the se
	Total 15		Total
	Electives		Electives
11-	English	II~	English
14-	Mathematics	14-	Mathematics
17-1	Mathematics	17-1	Spanish 3
41-47	Water Power Engineering 3	41-63	Contracts 3
61-12	Dynamo Laboratory 3	51-95	Mech. Engineering Topics 2 Electricity 3
61-14	Electricity	61-14	Electricity
61-15	Electrical Engineering 3	61-16	Electrical Engineering 3 Economics
61-23	Dynamo Design 3	00-	Economics
81-5	Engineering Economics 3		
01-5	Engineering Economics 3		
	ELECTRICAL H	CNOIN	FERING
	ELECTRICAL I	SNGIN	LEKING
	FIRST TERM		SECOND TERM
	Term hour		Torm hour
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61-14	Electricity 3	61-16	Electrical Engineering 3
61-15	Electrical Engineering 3	61-99	Thesis 3-5
61-23	Dynamo Design 3		
71-2	Military Engineering 3		
	Total 15		Total 9-11
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14-	Mathematics	14-	Mathematics
17-1	Spanish 3	17-1	Spanish 3
41-47	Water Power Engineering 3 Engine Design 3	41-63	Contracts
51-7	Engine Design 3	51-8	Power Plant Design 3
51-15	Dynamics of Machinery 3	51-18	Machine Design 3
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61-17	Dynamics of Machinery 3 Machine Design 3 Mechanical Engineering Lab. 3 Telephone and Telegraph 3	66-	Economics
66-	Economics	00-	Economics
81-5	Engineering Economics		
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	CHEMICAL E	NGINI	FRING
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35-5	Can Amalania	35-5	Fine Agent
35-9	Gas Analysis	35-7	Fire Assay
35-17	Theoretical Chemistry 3 Applied Chemistry 3 Dynamo-Electric Machinery 3 Military Engineering 3	25-11	Theoretical Chemistry 3
61-3	Dynamo-Electric Machinery 3	35-17	Applied Chemistry 3
71-2	Military Engineering 3	35-99	Thesis
	Total	00 ),	Thesis
	Electives		Electives
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Y/7 -	German 15 or 22 3		German 15 or 22 3
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<sup>\*</sup>Two terms; three term hours each.
†Two terms; first term, one term hour; second term, two term hours.
|| Two terms; four term hours each.
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<sup>\*</sup>Two terms; three term hours each.

## Departments of Instruction

### ENGLISH and MODERN LANGUAGES

TI-I English. A study of the elemental forms of literary and scientific writing: description, exposition, directions, criticism, argument, and narration, with the ultimate aim of helping the student to think for himself. Reading of illustrative literature. One lecture and three recitations a week.

First term. Three term hours.

PROFESSOR SEAVEY, MR. HARVEY, and MISS McCALLUM

11-2 English. A study of actual problems in expression. Reading in general science and literature under the guidance of weekly lectures. Three recitations a week. Preparation, 11-1.

Second term. Three term hours.

PROFESSOR SEAVEY, MR. HARVEY, and MISS McCALLUM

[11-4 English. An advanced subject in general composition, including the writing of daily and fortnightly themes. Two periods a week. Preparation, 11-2.

Second term. Two term hours. PROFESSOR SEAVEY and Mr. HARVEY]

the beginnings to about 1750, aiming to broaden the student's appreciation of what he may get from books, and to suggest ways in which the past throws light on the problems of the present. Three periods a week. Preparation, 11-2.

First term. Three term hours.

Mr. HARVEY and MISS McCALLUM

11-6 English. A study of some of the most important literary and scientific developments of the nineteenth century. Three periods a week. Preparation, 11-2.

Second term. Two term hours.

PROFESSOR SEAVEY, Mr. HARVEY, and MISS McCallum

[11-7 English. Advanced English literature. A study of some author, period, or type. The definite work to be carried on will be outlined by the instructor in charge each June for the following term. Three periods a week: two recitations and one thirty-minute conference. Preparation, 11-6.

First term. Two term hours.]

11-8 English. A detailed study of the most important problems of technical writing. Two periods a week. Preparation, 11-2.

Second term, Two term hours.

r1-9 English. An advanced subject in technical composition. No class meetings; each student writes papers from ten to fifty pages in length under the individual direction of the instructor. The subjects are taken, as far as possible, from technical work previously done by the student outside of college, or from special research. One thirty-minute conference a week. Preparation, 11-8.

First term; repeated in second term. Two term hours.

PROFESSOR SEAVEY

11-13 English. Argumentative composition adapted to meet the special needs of engineers. Three periods a week. Preparation, 11-2.

First term. Three term hours.

PROFESSOR SEAVEY

13-1 French. Elementary course. The essentials of grammar, with composition. Reading of short works of modern authors in prose and verse. Open to Freshmen whose entrance language is Latin, Greek, or Advanced German. Three recitations a week.

First and second terms. Six term hours.

MR. NEVENS

13-2 French. Review of grammatical principles especially with reference to difficulties encountered in translation. Outside reading of modern French novels. Class room work consisting of scientific reading from L'annee Scientific et Industrielle for 1913. Three recitations a week. Preparation, elementary credit in French, or 13-1.

First and second terms. Six term hours.

MR. NEVENS

15-1. German. Elementary course. The essentials of grammar with composition. Reading of short works by modern authors. Grammar: Vos' Essentials of German or Harris' German Lessons. Open to Freshmen whose entrance Language is Latin, Greek or Advanced French. Three recitations a week.

First and second terms. Six term hours.

MR. NEVENS

15-2 German. Review of grammatical principles, especially with reference to difficulties encountered in translation. Outside reading of modern German texts. Class room work consisting of reading from German scientific works. Three recitations a week. Preparation, elementary entrance credit in German, or 15-1.

First and second term. Six term hours.

MR. NEVENS

15-3 German. The rapid reading of modern technical prose in contemporary authors. Outside reading of modern novels. Elective for Sophomores, Juniors and Seniors who have passed 15-2 or its equivalent with at least a grade of B. Three recitations a week.

First term. Three term hours.

MR. NEVENS

15-4. German. Continuation of 15-3. Three recitations a week.

Second term. Three term hours.

MR. NEVENS

[17-1 Spanish. Elementary course. The essentials of grammar; reading of modern prose; practice in writing Spanish. Open to those who have received a grade of C or higher in French 13-2, or German 15-2. All others wishing to elect the subject should consult the instructor. Three recitations a week.

First and second terms. Six term hours.

MR. NEVENS?

### 21 DRAWING

21-4 Graphics. Required of those who have had little or no previous instruction in technical drawing. The course consists of exercises in the proper use and care of drafting tools; a thorough study of the principles of orthographic projection with applied problems relating to engineering drawing; isometric and perspective projections. Special attention is given to lettering, tracing, sketching and dimensioning. Three periods a week; two hours each.

First term. Three term hours.

ASSISTANT PROFESSOR CARROLL and Mr. LEIGHTON

21-5 Graphics. A study of the principles of descriptive geometry and its application to engineering by the solution of problems in which theory and practice are closely correlated. Three periods a week; two hours each. Preparation, 21-4 or 21-6.

Second term. Three term hours.

ASSISTANT PROFESSOR CARROLL and Mr. LEIGHTON

21-6 Graphics. Required of those who have had entrance credit or two or more years of previous instruction in technical drawing. The course consists of applied problems in orthographic projection; isometric and perspective projection; sketching and the reading and translation of drawings. Special attention is given to lettering, tracing and dimensioning. Two period a week; two hours each with preparation.

First term. Two term hours.

ASSISTANT PROFESSOR CARROLL and MR. LEIGHTON

21-8 Graphics. A study of the technique of graphic expression and its application in giving such complete and accurate information as is necessary for the practicing engineer. Emphasis is placed on the reading, as well as the making, of such drawings as are used in good practice in order to give familiarity with those methods and idioms of graphic expression which are accepted as standard by most draftsmen. Drafting practice is obtained by making detailed and assembly drawings from such data as will eliminate the possibility of copying. Three periods a week: two hours each. Preparation, 21-4 or 21-6.

Second term. Three term hours.

ASSISTANT PROFESSOR CARROLL and Mr. LEIGHTON

21-13 Mechanism. An introductory course, conducted mainly by graphical methods, and dealing with the fundamental laws governing the velocity ratio and paths of mechanical movements and their application to velocity diagrams, simple types of gearing, and other modes of transmission. Three periods a week; two hours each. Preparation, 21-4 or 21-6. First term. Three term hours.

ASSISTANT PROFESSOR CARROLL and Mr. LEIGHTON

### 25 MECHANIC ARTS

25-2. Woodworking. The course is intended to give a practical knowledge of woodworking hand tools and woodworking machines. Instruction is given in laying out work, sawing, planing, chiseling, boring, fitting, band and circular sawing, and is followed by lathe work, which includes center, chuck and face plate turning. Consideration is given to various commercial processes and manufacturing details. The laboratory work is based upon lectures, notes and class demonstrations. Frequent tests are given to insure a thorough knowledge of the principles involved. Two periods per week; three hours each.

First or second terms. Two term hours.

MR. ADAMS

25-3 Pattern Making. This is a laboratory course which comprises a study of the methods and principles of foundry practice leading to a knowledge of the requirements of pattern making. The course in pattern making consists of the layout and construction of split patterns, core boxes and built up work. The requirements of the moulder are constantly kept in mind and the several methods of construction possible in each case are discussed. Modern foundry and pattern shop methods are studied. The work in the shop is based on lectures, assignments from the text and class demonstrations, with frequent tests concerning the work at hand. Two periods per week; three hours each.

First or second term. Two term hours. Preparation 25-2 or its equivalent.

MR. Adams

25-8 Metal Work. This course is introduced by work at the forge in bending, drawing, upsetting, welding, tool-dressing, etc., followed by work at the vise in chipping, filing, and fitting. Lathe work, including straight and taper turning, chucking, boring, reaming, and thread cutting; also drilling, planing, shaper and milling-machine work. Textbook; Three periods per week; two of three and one-half hours each and one of one hour.

Second term. Three term hours.

MR. ADAMS

### 29 MATHEMATICS

29-3 Freshman Calculus. Fundamental principles. Algebraic differentials and integrals. Differential and integral rate problems. Maxima and Minima. Transcendental functions. Areas. Three periods a week; one hour each.

Second term. Three term hours. Preparation, 29-20.

PROFESSOR RANSOM, MR. H. RICE, and MR. L. H. RICE

29-4 Sophomore Calculus. Review of differentiation and integration. Applications. Summation problems. Use of tables. Centroids, moments and averages. Three hours a week. Preparation, 29-3.

First term. Three term hours.

PROFESSOR RANSOM, MR. H. RICE, and MR. L. H. RICE

29-5 Junior Mathematics. Approximate integration. Multiple integrals. Taylor's Theorem, and errors. Fourier's Series. Elements of Differential Equations. Three hours a week. Preparation, 29-4.

Second term. Three term hours.

PROFESSOR RANSOM

29-20 Analysis and Computation. Rounded numbers, trigonometric functions, 4- and 7-place logarithms, slide rule. Plane and right spherical triangles. Graphical representation of functions, typical variables. Rectangular coordinates, straight lines, conic sections and standard curves. Five periods a week.

First term. PROFESSOR RANSOM, MR. H. RICE, and MR. L. H. RICE

### 31 PHYSICS

31-1 Physics. The subjects considered are composition of forces static and kinetic equilibrium, the laws of motion, the energy principle, the simple types of motion including uniform and uniformly accelerated motion, rotation about a fixed axis, simple harmonic motion, wave motion, and resonance; in heat, thermometry, expansion, calorimetry, change of state, transfer, sources, uses, and the laws of thermodynamics. Lectures and recitations. Preparation, 29-20 or entrance Physics.

Second term. Three term hours.

PROFESSOR MARVIN, MR. POTE, and MR. KNIGHT

31-2 Physics. The subject of heat is carried over from the previous semester. Following this, the subjects considered are: Optics, sources of light, photometry, velocity, reflection, refraction, optical instruments, dispersion, color, interference, diffraction, polarization; in electricity, electrostatics, the condenser, the electric current, Ohm's law and applications,

power, magnetism, the magnetic circuit, electromagnetic induction, the principles of direct and alternating current machines and instruments.

One lecture and two recitations per week. Preparation, 31-1 or 31-31. First term. Three term hours.

ASSISTANT PROFESSOR MARVIN, MR. POTE, and MR. KNIGHT

31-8 Physics Laboratory. The first experiments relate to the use of the usual instruments for precise measurement and to the mechanics of solids, liquids and gases. These are followed by experiments in heat, including thermometry, vapor pressure, expansion, calorimetry, and mechanical equivalent. The use of graphical methods of interpreting data is taught in connection with these experiments. One three hour period, with one and one-half hours preparation weekly. Preparation, 31-1, or 31-31, simultaneously.

Second term. One and one-half term hours.

PROFESSOR MARVIN, MR. POTE, and MR. KNIGHT

31-9 Physics Laboratory. The experiments in heat, begun in 31-8, are completed. These are followed by experiments in optics and electricity. The experiments in optics include refraction, elementary spectrum analysis, and optical instruments. The experiments in electricity include measurement of resistance, current, electromotive force, and capacity. One period of three hours, with one and one-half hours preparation, weekly. Preparation, 31-2, or 31-32, simultaneously.

First term. One and one-half term hours.

PROFESSOR MARVIN, Mr. POTE and Mr. KNIGHT

31-31 Physics. Subjects the same as 31-1, but with one additional recitation per week. Required, instead of 31-1, for students who have not presented Physics for admission. Lectures and recitations. Preparation, 29-20.

Second Term. Four term hours.

PROFESSOR MARVIN, Mr. POTE and Mr. KNIGHT

31-32 Physics. Subjects the same as 31-2, but with one additional recitation per week. Required, instead of 31-2, for students who have not presented Physics for admission. Lectures and recitations. Preparation, 31-21.

First term. Four term hours.

PROFESSOR MARVIN, Mr. POTE and Mr. KNIGHT

### 35 CHEMISTRY

35-1 General Inorganic Chemistry. An introductory course in theoretical and descriptive inorganic chemistry, with a thorough consideration of the simplest carbon compounds and principal technical processes. Three

periods a week, two lectures, one three hour laboratory period with conferences.

First and second terms. Six term hours.

PROFESSOR DURKEE, MR. BAKER, DR. CHANDLER and Mr. POULEUR

35-2 Qualitative Analysis for the detection of the metals, a course which includes the experimental development of schemes for the division of the metals into groups, the separation and detection of the metals in each group,—a study of all the chemical changes and analytical details, together with the correct analysis of six known solutions and thirteen unknown. Two periods a week; three hours each; laboratory work and conference. Six lectures.

First term. Two term hours.

PROFESSOR DURKEE, MR. BAKER, and ASSISTANTS

35-3 Qualitative Analysis, Advanced, dealing with methods to effect solution of solids, the detection of mineral and common organic acids, the complete analysis of inorganic solids, including mixtures of salts, minerals, alloys, and slags. Three known and thirteen unknown are required, and thorough study of the chemical changes and conditions involved in the analyses. Two periods a week; three hours each; laboratory work and conference.

Second term. Two term hours.

MR. BAKER and ASSISTANT

35-4 Quantitative Analysis. Theory and practice of gravimetric and volumetric analysis, including the determination of chlorine by the ordinary and Gooch crucible methods, iron and sulphur in ferrous ammonium sulphate, silica in a silicate, phosphorus in a phosphate, complete analysis of dolomite, and brass, preparation of strictly half-normal sodium hydroxide and hydrochloric acid solutions, the volumetric analyses of soda ash and oxalic acid, the analysis of iron ore by the dichromate and permanganate methods, determination of chromium in chromite, of antimony by the iodine method, and silver by the sulphocyanate method. Three periods a week; three hours each; laboratory work and conference.

First and second terms. Six term hours.

PROFESSOR DURKEE and MR. BAKER

35-5 Quantitative Analysis. Technical. Work varied somewhat to meet the needs of individual students. Course ordinarily comprises proximate analysis of coal, nitrogen in coal, by Kjeldahl's method, complete analysis of boiler scale, mineral and sanitary analysis of water, determination of copper in ores by iodine and cyanide methods, of zinc by ferro-cyanide method, complete analysis of Babbitt metal, determination of lead in ores and manganese, sulphur, phosphorus, silicon, and carbon in iron and steel. Three periods a week; three hours each; laboratory work and conference.

First and second terms. Six term hours,

PROFESSOR DURKEE

35-7 Fire Assay. A course which deals with the theory and practice of sampling and assaying gold and silver ores. Two periods a week; three hours each; laboratory work and conference.

Second term. Two term hours.

PROFESSOR DURKEE, MR. BAKER, and MR. POULEUR

35-8 Metallurgy of Iron and Steel. Considered largely from the chemical side, and includes the study of ores, fluxes, fuels, furnaces, and the other mechanical devices used in the commercial production of pig iron, wrought iron, and steel, together with the solution theory of iron and steel, heat treatment of steel, and production of malleable cast iron. Two periods a week; one hour each; lectures and recitations.

Second term. Two term hours.

MR. BAKER

35-9 Technical Gas Analysis, by the Orsat, Elliot, and Hempel systems. One period a week, of three hours.

First term. One term hour.

Mr. Pouleur

35-10 Organic Chemistry. This course consists of lectures, recitations, and laboratory work. It is intended to familiarize the student with the typical compounds of carbon and their more important derivatives. The work in the laboratory includes the preparation of certain of the more important substances referred to in the lectures, and the identification of certain classes of compounds. Four periods a week; three lectures; one three-hour laboratory period.

First and second terms. Eight term hours.

Dr. CHANDLER and ASSISTANT

35-11 Theoretical Chemistry. The subject matter of this course consists largely of the principles usually included under the head of Physical Chemistry. The work in the laboratory consists of physical chemical measurements and experiments of a physical chemical nature. Three periods a week, two lectures, one three-hour laboratory period.

First and second terms. Six term hours.

DR. CHANDLER

35-17 Applied Chemistry. A course dealing with the most important applications of inorganic and organic chemistry to manufacturing purposes, such as the production of sulphuric acid, soda, illuminating gas, and sugar. Three periods a week. Two lectures or recitations, and one three-hour laboratory period.

First and second terms. Six term hours.

PROFESSOR DURKEE

35-20 Chemistry. Subjects the same as 35-1, but with one additional recitation per week. Four periods a week, two lectures, one recitation, one three-hour laboratory period with conferences.

First and second terms. Eight term hours.

PROFESSOR DURKEE, Mr. BAKER, Dr. CHANDLER and Mr. POULEUR

35-99 Chemical Engineering Thesis. The development of a Chemical Engineering problem by extended personal research. The head of the department has authority to substitute another engineering subject for the thesis.

Second term. Three to five term hours.

PROFESSOR DURKEE, DR. CHANDLER, and MR. BAKER

### 41 CIVIL ENGINEERING

41-4 Surveying. The elements of surveying; practice in the field associated with note-taking; mathematics applied to computations of dimensions, areas, and volumes; graphics by plotting, and plan making. Textbook: Tracy's Plane Surveying. Two periods a week; three hours each.

First term. Two term hours.

PROFESSOR SANBORN, ASSISTANT PROFESSOR CONNER, and Mr. BURDEN

41-12 Railroad Surveying. The greater part of the problems selected for this course are based on information secured by the student while engaged in the reconnoissance and preliminary survey of a short line of proposed railroad near the College. These problems consist of the more important ones that daily arise in the practice of the railroad engineer, and they comprise the determination and location of all simple and compound curves that might be required for the final location of any line; the accurate plotting of the survey notes by means of a system of co-ordinates; a preliminary estimate of the materials of construction required, and the completion of all drawings. Text books: Railroad Curves and Earthwork by Allen. Three periods a week; three hours each. Preparation, 41-4.

First term. Three term hours. Assistant Professor Conner

41-13 Railroad Engineering. A thorough analysis, both theoretical and practical, of the transition spiral; the study of earthwork computations, use of the mass diagram, determining cost of overhaul, use and computation of the vertical curve, proper methods of attack in steamshovel work, the design and estimate of trestle construction, of culverts and waterways, and a general treatment of methods employed in locating all structures of standard design that support the roadbed. A brief study is made of the analysis of labor costs, and of the general principles underlying the scientific management of materials and men. Textbooks: The Railway Transition Spiral, by Talbot; American Civil Engineering Pocketbook Three periods a week; one hour each. Preparation, 41-12.

Second term. Three term hours. Assistant Professor Conner

41-14 Railroad Engineering. A recitation course comprising the study of tunnel design, roadbed construction, track materials and track work, frogs and switches, yard and terminal layouts, siding design and construction, signaling and interlocking, equipment and tools, and the general

principles of railroad maintenance. Problems are given in the elementary economic principles involved in railroad upkeep, the treatment of ties, and the capitalized comparison of structures. The student may be required to develop a proposed siding both for the design and the actual staking. Textbooks: The American Civil Engineers' Pocketbook. Three periods a week; one hour each. Preparation, 41-13. First term. Three term hours.

ASSISTANT PROFESSOR CONNER

41-17 Railroad Engineering Economics. Lectures and recitations on the economic principles underlying the proper management of all engineering business associated with the location, development, management, and operation of a railroad. A general outline of the procedure in financing railroad ventures is given with the attendant principles involved in bonding and underwriting such projects, and their application is fully demonstrated by the solution of typical problems. Text book: Economics of Railroad Construction, by Webb. Three periods a week; one hour each. Preparation, 41-14.

Second term. Three term hours.

Assistant Professor Conner

41-21 Highways. Tests of sand, clay, cements, mortars, and crushed stone. Study of requirements and specifications. Tests of tars, oils, and asphalts. Study of sources, manufacture, and requirements. Inspection of a tar refinery and laboratory where commercial methods may be observed.

Field survey for highway location. Study of topography, and conditions affecting location, design of highway, grades, and sections. Field study of types of permanent pavements and maintenance with textbook assignments. Text book: American Civil Engineers' Pocketbook. One recitation and one three-hour laboratory period per week. Preparation, 41-4.

Second term. Two term hours.

MR. BURDEN

41-31 Geodesy. The determination of a true meridian by star and solar observations, accurate measurement of a base line, of angles in a triangulation system, and the adjustment of observations by the method of least squares. Two periods a week; three hours each. Preparation, 41-4.

Second term. Two term hours. Assistant Professor Conner

41-40 Hydraulic Engineering. Experiments and observations on the flow of water through nozzles, weirs, pipes, canals, and water turbines, together with the study of the associated theory of hydraulics and elementary water power engineering. Textbook: Elements of Hydraulics, by Slocum. Three periods a week. Preparation, 20-3.

Second term. Three term hours.

41-43 Hydraulic Measurements. Experiments on weirs, standard nozzles, proportional water meter, impulse water wheel, duplex pump, and centrifugal pump; river and canal gagings by current meter. Tests of 100 horsepower turbine, 36-inch Venturi Meter, 40-inch riveted pipe, and 10-foot weir. Textbook: Elements of Hydraulics, by Slocum. Two periods a week; three hours each. Preparation, 41-40.

Second term. Two term hours.

PROFESSOR SANBORN

41-46 Water Supplies. The examination of water supplies, quality of water, communicable diseases, purification of water, water supplies, pipes, reservoirs, dams, pumping machinery. Textbook; American Civil Engineers' Pocketbook. Three periods a week; one hour each. Preparation, 41-40. First term. Three term hours.

41-47 Water Power Engineering. Water shed areas, stream flow, hydraulics of water wheels and turbines, analysis of turbine tests, selection of turbine for given conditions, water-power development and value of privileges. Textbook: American Civil Engineers' Pocketbook and class notes. Three periods a week; one hour each. Preparation, 41-40.

First term. Three term hours.

PROFESSOR SANBORN

41-48 Sewerage. Purification of sewage, design of sewers, forms of construction, modern methods of sewage and garbage disposal, principles of irrigation and drainage. Textbook: American Civil Engineers' Pocketbook. Three periods a week; two hours each. Preparation, 41-46.

Second term. Three term hours.

PROFESSOR SANBORN

41-51 Fire Prevention. Fire streams, fire pumps, meters, pipe systems, including automatic sprinklers, watchman service, public fire departments, fire causes, fire-proof and slow-burning construction. Recitation and design from field practice. Two periods a week; two hours each. Preparation, 41-40.

Second term. Two term hours.

PROFESSOR SANBORN

41-63 Contracts. The essential elements of all contracts, their formation and modes of discharge, the fundamental principles of successful writing and interpretation of contracts for the erection of engineering works are carefully considered. Commercial contracts are also studied, including contracts of association, of sale, of transportation, and instruments of credit. The duties and legal responsibilities of the engineer as agent, business man, or independent contractor are emphasized, and some practice is had in writing engineering contracts and specifications. Textbook: Contracts in Engineering by Tucker, Elements of Specification Writing, by Kirby. Three periods a week; one hour each.

Second term, Three term hours. ASSISTANT PROFESSOR CONNER

41-95 Civil Engineering Topics. Presentation and discussion of engineering topics. Textbook: Proceedings of the American Society of Civil Engineers for the present year. Two periods a week; one hour each. Preparation, Junior Civil Engineering courses.

First term. Two term hours.

PROFESSOR SANBORN

41-99 Civil Engineering Thesis. A special investigation by research, design, or experimentation. The head of the department has authority to substitute another engineering subject for the thesis.

Second term. Three to five term hours.

PROFESSOR SANBORN and ASSISTANT PROFESSOR CONNER

#### 45 APPLIED MECHANICS

45-1 Applied Mechanics. A course in the strength of materials including the mechanics and design of beams, girders, columns and shafts. Three periods a week; recitations and lectures with numerous problems. Preparation, 29-4 and 45-21.

First term. Three term hours.

PROFESSOR ROCKWELL

45-2 Applied Mechanics. A course in graphic statics and stresses in simple structures, including also problems in kinetics, work and energy and friction. For students in civil and structural engineering. Three periods a week; recitations and lectures with problems. Preparation, 45-1.

Second term. Three term hours.

ASSISTANT PROFESSOR SMITH

45-3 Structural Mechanics. A treatment of the mechanics of masonry and reinforced concrete structures, including the design of retaining walls, masonry arches, and foundations. Three periods a week; recitations and lectures with problems and designs. Preparation, 45-2 or 45-4.

First term. Three term hours.

PROFESSOR ROCKWELL

45-4 Applied Mechanics. A course in the mechanics of motion, cinetics, work and energy, and friction, including some graphic statics and tresses in simple structures. For students in mechanical, electrical and hemical engineering. Three periods a week; recitations and lectures with problems. Preparation, 45-1.

Second term. Three term hours.

PROFESSOR ROCKWELL

45-12 Applied Mechanics Laboratory. This course deals with the sistance of the materials of construction, and comprises the testing of 1st iron, steel, wrought iron, timber, and concrete in tension, compression, and shear, and the determination of the elastic limits, ultimate rengths, and coefficients of elasticity of these materials. One period a 1st two hours. Simultaneous with 45-1.

First term. One term hour.

ASSISTANT PROFESSOR SMITH

45-21. Mechanics. An elementary course in the principles of statics, centres of gravity, moments of inertia and simple beams. Three periods a week Preparation, 20:3.

Second Term. Three term hours.

PROFESSOR ROCKWELL and ASSISTANT PROFESSOR SMITH

#### 47 STRUCTURAL ENGINEERING

- 47-1 Roofs and Bridges. A study of the fundamental principles of Structural Engineering. It includes the theory of algebraic and graphical stress analysis for statically determinate structures, including roofs, bridges, towers, etc., and the design of structural members and details. Three periods a week; lectures and recitations, with problems. Preparation, 45-2 or 45-4.

  First term. Three term hours.

  PROFESSOR ROCKWELL
- 47-2 Theory of Structures. An advanced course in the theory and design of structures. The method of influence lines is used to a considerable extent in addition to the usual algebraic methods. Three periods a week; lectures and recitations, with problems. Preparation, 47-1 and 45-3.

Second term. Three term hours.

PROFESSOR ROCKWELL

- 47-3 Structural Design. An introductory course in the design of framed structures. It consists of (a) the critical examination of, and report on, some existing structure and (b) the design and detail drawings for a steel mill building. Three periods a week; three hours each. Simultaneous with 45-2.

  Second term. Three term hours.

  ASSISTANT PROFESSOR SMITH
- 47-7 Bridge Design. A course in the design of riveted and pin connected steel bridges. It consists of (a) one complete design of a typical bridge, including a critical study of the important details, carried on under the guidance of the instructor, and then (b) each student is given a different set of data from which he is required to make an independent design and general drawing. Three periods a week; three hours each. Preparation, 47-3. Simultaneous with 47-1.

First term. Three term hours.

ASSISTANT PROFESSOR SMITH

- 47-8 Structural Design. The design of masonry and reinforced concrete structures. Two periods a week; three hours each. Preparation, 45:3.

  Second term. Two term hours. Professor Rockwell
- 47-95 Structural Topics and Reports. Reports by each student on assigned reading in engineering literature, and on the stability and safety of structures, based on a personal examination by the student. The presentation is by lecture, but a written copy of each report must be left with the department. Two periods a week; one hour each. Preparation, credit in required work of the Junior year.

First term. Two term hours.

PROFESSOR ROCKWELL

47-99 Structural Engineering Thesis. A single topic is developed by extended research, design, or experimentation.

Second term. Three to five term hours.

PROFESSOR ROCKWELL and ASSISTANT PROFESSOR SMITH

#### 51 MECHANICAL ENGINEERING

51-1 Heat Engineering. This course deals with the generation of steam and its use in the steam engine. It comprises a study of modern types of boilers and their auxiliary apparatus, simple and compound engines, both condensing and non-condensing; a discussion of the elementary principles of thermodynamics and of the use of the indicator in steam engine practice. Some attention is given to the production of gas for power purposes and its use in the gas engine. Three periods a week; one hour each. Preparation, 31-1, or 31-31, and simultaneous with 21-13.

First term. Three term hours.

PROFESSOR CHASE and Mr. MACNAUGHTON

51-3 Heat Engineering. This course is devoted to the thermodynamics of the steam engine and other heat engines, and includes a study of the properties of steam, gas and air as used in steam engines, turbines, gas engines, air compressors and blowers; also the working fluids and saturated vapors used in refrigeration. The object of the course is to teach the principles, and their application to practical problems. Three periods a week; one hour each. Preparation, 29-4 and 51-1.

Second term. Three term hours.

PROFESSOR CHASE

51-7 Engine Design. The design of the steam turbine, steam engine, and gas engine, involving the strength and proportion of parts and including the layout of the valve gear of high speed engines, the Corliss gear and locomotive valve gears. Three periods a week; two hours each. Preparation, 51-3, and simultaneous with 51-15.

First term. Three term hours.

PROFESSOR CHASE

51-8 Power Plant Design. A study of steam power plant equipment, including the selection of boilers and engines; pumps, heaters, condensers; arrangement of piping; chimneys, mechanical draft; mechanical stoking, coal handling. Boiler design, including calculations for one type of boiler. Three periods a week; two hours each. Preparation, 51-7.

Second term. Three term hours.

PROFESSOR CHASE

51-15 Dynamics of Machinery. A graphical and analytical consideration of the transmission of energy in machines and power transmission. The construction of inertia curves and crank effort diagrams applied to the solution of problems relating to fluctuations in speed, flywheels, balancing of moving parts and regulation by governors. Three periods a week; one hour each. Preparation, 21-13 and 45-4.

First term. Three term hours.

PROFESSOR CHASE

51-18 Machine Design. An application of the principles of mechanism and mechanics to the solution of definite problems in the design of representative types of machine. A systematic training of the judgment is an important part of this course. Three periods a week; three hours each. Preparation, 21-8, 21-13 and 45-4.

First and second terms. Six term hours.

PROFESSOR ANTHONY and Mr. MACNAUGHTON

51-24 Mechanical Engineering Laboratory. The determination of the clearance of engines; valve setting on plain slide valve, riding cutoff, and Corliss engines. Gage testing; the adjustment and use of indicators; testing indicator springs; the use of several types of steam calorimeters; injector test; flow of steam through orifices. The results of all laboratory work are submitted in the form of carefully written reports. Three periods a week; three hours each. Preparation, 51-1.

First term. Three term hours.

Mr. MACNAUGHTON

51-26 Mechanical Engineering Laboratory. Steam engines, pumps, and auxiliary apparatus. Tests on riding cut-off shaft governor and Corliss engines; a 16 x 8 ½ x 9 duplex steam pump; measurement of water by weir, nozzle and meter; condenser tests; analysis of flue gases. Internal combustion engines. Tests on a 10 H.P. 4 cycle gas engine, 11 H.P. 2 cylinder 2 cycle gasoline engine, automobile engines, and marine type engines, including instruction and practice in their operation. Three periods a week; three hours each. Preparation, 51-3 and 51-24.

First term. Three term hours.

PROFESSOR CHASE, Mr. ADAMS and Mr. MACNAUGHTON

return tubular boiler; determination of the velocity of steam through ports; coefficients of friction with different oils and friction on different types of bearings; test on a 35-inch exhaust fan; tests on a steam turbine and on an air compressor; test at a power station, and other tests which may be arranged. Three periods a week; three hours each. Preparation 51-26. Second term. Three term hours.

Professor Chase and Mr. MacNaughton

51-95 Mechanical Engineering Topics. A course of lectures by students. Each member of the course chooses three topics from the proceedings of the American Society of Mechanical Engineers. The subjects are presented to the class in the form of lectures, followed by discussion and criticism. Two periods a week. Preparation, Junior Mechanical Engineering courses.

Second term. Two term hours. PROFESSORS ANTHONY and CHASE

51-99 Mechanical Engineering Thesis. An essay based on extended personal research, design, or experimentation. The head of the department has authority to substitute another engineering subject for the thesis.

Second term. Three to five term hours.

PROFESSORS ANTHONY AND CHASE

#### 54 GEOLOGY

54-1 Physical Geology and Geography. Lectures, recitations, and field work. Mainly for those intending to teach. Three periods a week; one hour each; and seven Saturday half-day excursions.

Second term. Three term hours.

PROFESSOR LANE

54-5 Physical Geology.

First term. Three term hours.

PROFESSOR LANE

54-23. Economic Geology.

Second term. One term hour.

PROFESSOR LANE

54-24. Historical Geology.

Second term. Two term hours.

PROFESSOR LANE

#### 61 ELECTRICAL ENGINEERING

61-3 Dynamo Electric Machinery. An elementary course dealing with the fundamental principles of dynamo electric machinery and their application in the construction and operation of generators and motors. Some attention is also given to storage batteries, arc and incandescent lamps, and systems of direct-current distribution. Three periods a week; one hour each. Preparation, 61-20.

First term. Three term hours.

ASSISTANT PROFESSOR MUNRO

61-5 Alternating Current Machinery. A course treating of the theory, construction, and operation of synchronous machinery. Three periods a week; one hour each. Preparation, 61-3.

Second term. Three term hours. Assistant Professor Munro

61-8 Electrical Laboratory. Electrical measurements and testing, including calibration of instruments, study of arc and incandescent lamps, and direct current dynamos. Three periods a week; three hours each.

Preparation, 61-3.

Second term. Three term hours.

Assistant Professors Rollins and Munro

61-12 Dynamo Laboratory. Alternating current testing. Three periods week; three hours each. Preparation, 61-5.

First term. Three term hours.

ASSISTANT PROFESSOR MUNRO

61-14 Electricity. Theory of alternating currents and of alternating current machinery. Three periods a week; one hour each. Preparation, 61-5.

First and second terms. Six term hours. Assistant Professor Bush

61-15 Electrical Engineering. A course dealing with the production, transmission, distribution, and utilization of electrical power. Three recitations a week, with solution of assigned problems. Preparation, 61-5.

First term. Three term hours.

PROFESSOR HOOPER

61-16 Electrical Engineering. A continuation of 61-15. Three periods a week; one hour each. Preparation, 61-15.

Second term. Three term hours.

PROFESSOR HOOPER

61-17 Telephone and Telegraph. A course on principles and operation of telephone and telegraph systems. Three periods a week. Preparation, 61-20.

First term. Three term hours. ASSISTANT

ASSISTANT PROFESSOR ROLLINS

61-20 Electrical Engineering. An elementary course in the theory and practical applications of electrical engineering, dynamo-electric machinery, electrical instruments, electro- chemistry, electrical transmission of power, and electrical communication. Textbook, problems, and written reports. *Preparation*, 31-2, or 31-32.

Second term. Three term hours.

PROFESSOR HOOPER

61-23 Dynamo Design. A course dealing with the application of the laws of electricity and magnetism to the calculations of electrical apparatus. Three periods a week; two hours each. Preparation, 61-5.

First term. Three term hours.

ASSISTANT PROFESSSOR MUNRO

61-27 Radio-Engineering. An elementary course in wireless telegraphy and telephony. Lectures and laboratory work. As far as practicable the equipment of the American Radio & Research Corporation will be available for purposes of instruction. Open to Juniors and Seniors with approved preparation. Three periods a week.

Second term. Three term hours.

ASSISTANT PROFESSOR BUSH and Mr. POWER

61-96 Electrical Topics. Lectures by students on electrical subjects, followed by discussion and criticism. Three periods a week. Preparation, 61-15.

Second term. Two term hours. Assistant Professor Rollins

61-99 Thesis. An essay based on some construction, design, or investigation. The head of the department has authority to substitute another engineering subject for the thesis.

Second term. Three to five term hours.

PROFESSOR HOOPER, ASSISTANT PROFESSORS ROLLINS, MUNRO and BUSH

#### 64 MINERALOGY

**64-1 Mineralogy and Lithology.** Two recitations and four hours laboratory work a week. Preparation, 35-1.

First term. Three term hours.

PROFESSOR LANE

64-1 Mineralogy alone is of use to civil and structural engineers, but those who are looking to mining or chemical engineering should also take 64-2.

[64-2 Crystallography and Advanced Mineralogy. Two lectures and four hours laboratory work a week. Preparation, 64-1.

Second term. Three term hours.

PROFESSOR LANE]

#### 71 GENERAL ENGINEERING

71-2 Military Engineering. A course in the theory and practice of map making, bridge, highway, and railroad construction, together with certain applications of gasoline engines, pumping machinery, field chemistry, and electrical wiring and appliances. Three periods a week; three hours each.

First term, three hours.

Assistant Professor Connor, Professors Chase, Durkee, Rockwell, Sanborn and Hooper

#### 81 POLITICAL ECONOMY

81-1 Elements of Economics. Designed especially for students of engineering; aims at a comprehensive study of the elements of economics, with special reference to present day economic and social problems. Text book (Fetter, Economic Principles), lectures, tests. Three recitations a week.

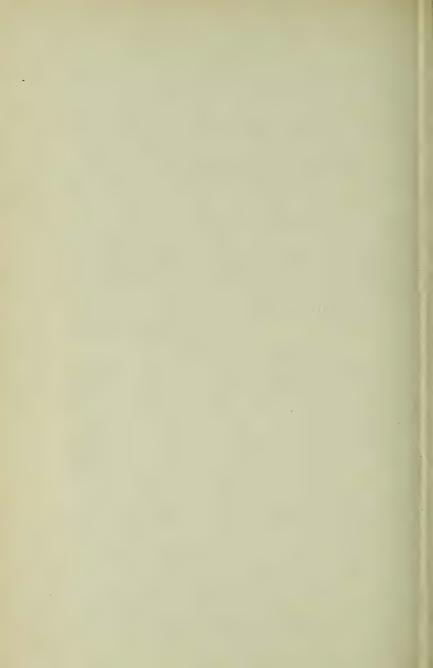
First term. Three term hours.

MR. TUCKER

81-5 Engineering Economics. Designed primarily to study the financial, legal, and operating elements of industrial organizations; the elements of appraisals and valuations; the study and use of the terms, amortization, depreciation, etc. This course is open to students in the Electrical, Mechanical, and Chemical courses. Text books: Engineering Economics by Fish; Efficient Cost Keeping. Three hours a week; lectures, tests, problems and reports.

First term, three term hours.

ASSISTANT PROFESSOR CONNER



# THE BROMFIELD-PEARSON SCHOOL

HERMON CAREY BUMPUS, Ph.D., Sc.D., LL.D., President

GARDNER C. ANTHONY, A.M., Sc.D., Dean

### The Bromfield-Pearson School

The Bromfield-Pearson School is intended to meet the wants of young men whose preparation for an Engineering course may be partially deficient in one or more of the required branches, but whose practice and experience in the applied part of Engineering may qualify them to pursue college work while making up these deficiencies. By this means an engineering education is made possible to those who may have been deprived of the opportunities for obtaining the necessary preparation, or who may have allowed considerable time to elapse between the high school and the college course. A mature mind, industrious habits, and appreciation of the value of an engineering education are essential.

#### ADMISSION REQUIREMENTS

Students intending to join the School must obtain from the Dean an application blank, which they are required to fill out and return. On receipt of this statement the Dean will give the conditions of entrance and the program of studies.

No student will be admitted to the School for more than one year.

Students admitted to college classes will be required to obtain a somewhat higher per cent. than the minimum requirement for engineering students.

On the satisfactory completion of one year of work students will be given a certificate of admission to the College. If they have maintained an approved grade in subjects required for the degree they will receive due credit.

The President and the Dean have final authority concerning admission, promotion, and discipline.

For other information address Gardner C. Anthony, Dean of the Bromfield-Pearson School, Tufts College, Mass.

# THE CRANE THEOLOGICAL SCHOOL

LEE SULLIVAN McCOLLESTER, S.T.D., Dean

# Standing Committees

COMMITTEE ON CURRICULUM: Dean McCollester, Chairman; Professors Cushman and Skinner.

COMMITTEE ON PROMOTIONS: Dean McCollester, Chairman; Professors Skinner and Mitchell.

# Faculty of the Crane Theological School

HERMON CAREY BUMPUS, Ph.D., Sc.D., LL.D., PRESIDENT

LEE S. McCOLLESTER, S.T.D., DEAN Packard Professor of Christian Theology

CHARLES H. LEONARD, A.M., S.T.D., LL.D., DEAN, EMERITUS Goddard Professor of Homiletics and Pastoral Theology

WILLIAM H. REED, A.M., RECORDING SECRETARY †

#### Professors

HENRY I. CUSHMAN, A.M., D.D. Homiletics

HINCKLEY G. MITCHELL, D.D.

Hebrew and Old Testament Exegesis

CLARENCE R. SKINNER, A.M.

Woodbridge Professor of Applied Christianity

#### Instructors

L. ALONZO BUTTERFIELD, Ph.D. Instructor in Oratory

Students in the Crane Theological School are also admitted to classes in the School of Liberal Arts.

#### NON-RESIDENT LECTURERS

FREDERICK A. BISBEE, D.D.

HAROLD MARSHALL

FREDERIC W. PERKINS, S.T.D.

LEVI M. POWERS, S.T.D.

EDSON REIFSNIDER, D.D.

REV. HERBERT E. BENTON, A.B., B.D.

<sup>†</sup> Ex officio, as Recording Secretary of the Faculty of Arts and Sciences.

# The Crane Theological School

### The Relation of the School to Tufts College

In 1906 the name of the Divinity School was changed to the Crane Theological School, in recognition of a gift of one hundred thousand dollars from the estate of the late Thomas Crane of New York, whose son, Albert Crane, '63, thus carried out the expressed purpose of his father.

The Crane Theological School is one of the coördinate departments of Tufts College. Students of the School are members of the College, enjoying its privileges and subject to its regulations.

#### Outline of Courses

Recognizing that peculiar difficulties and radically new demands confront the Christian minister to-day, Crane Theological School frankly seeks to adapt its discipline to the new conditions. This, quite naturally, has led to the adoption of a distinct and somewhat distinctive ideal or aim. While rigorously faithful to the fundamentals of a liberal culture, and alert to discover and foster special interests and gifts, the primary aim is *practical* rather than *academic*—to turn out, not men distinguished for varied and curious learning, but men thoroughly equipped for moral and religious leadership.

Three courses are presented: one of three years, for students who have already received regular college degrees, leading to the degree of S.T.B.; one of five years, for students who have no degree but have had, or received at Tufts College, the essentials of the College course together with the theological course, leading to the degree of S.T.B.; and one of six years, combining the College and Theological Courses, leading to the two degrees of A.B. and S.T.B.

Students may also enter for special courses.

The number of hours required for the different degrees, and the arrangement of the work depend on the degree or degrees sought. The requirement for the combined course, leading to the two degrees of A.B. and S.T.B., is one hundred eighty-two hours. The subjects are taken from the following list.

Foreign Languages. Hebrew, Greek, Latin, German, French.

Science. Mathematics, Physics, Chemistry, Biology, Geology.

History. Ancient and Modern; Civil and Religious; Apostolic Church; Evolution of Religions.

Bible. Old Testament and New Testament Literature; Theology; Ethics; History; Criticism.

Philosophy. Logic; Ethics; Psychology; Theism: Systematic Theology; Types of Christian Faith.

Sociology. Economics; Applied Christianity; Missions; Social Laboratory; Jesus and Modern Society.

English. Rhetoric; Oratory; Literature; Homiletics; History of Preaching; Liturgics.

Religious Education. Religious Psychology; Religious Pedagogy; Sunday Schools; Pastoral Methods; Church Unity; Scientific Management.

#### Physical Education.

A student taking the six year course must complete the Foreign Languages and Science required for the Bachelor's Degree in the School of Liberal Arts and in addition he must take eighteen hours of History, twenty-one hours of Bible, twenty-one hours of Sociology, twenty-four hours of Philosophy, and thirty-six hours of English.

#### Courses of Instruction

In the following list of subjects, the department and name of he officer in charge are first given. Each department has its fixed number and each subject its symbol.—When subjects do not continue through the year, (F) means that they occur in the first term and (S) means that they occur in the second. Unless otherwise indicated, instruction in each subject is given three times each week and its credit is three term-hours per half-year. Subjects enclosed in brackets are not offered during the current year.

#### 16 ETHICS AND PHILOSOPHY OF THEISM

Professors — and Schmidt

The details of these courses are to be found in the courses offered by the School of Liberal Arts.

- 16-1. (F) Introduction to Philosophy.
- 16-3. (F) Logic.
- 16-55. Psychology.

#### 56 HISTORY OF RELIGIONS

#### PROFESSOR SKINNER

- 56-4. Origin and Development of Primitive Religions; a brief survey of Confucianism, Shintoism, Buddhism, Religions of India, Mohammedanism, etc.
- 56-5. (F) History of the Christian Church to the Protestant Reformation: The Apostolic Age; Rise of the Papacy; Study of the great men and institutions of the Middle Ages; Development of Theology; Holy Roman Empire; Scholasticism.
- **56-6.** (S) History of the Christian Church from the Reformation to the present time: The Reformation in Germany, Hungary, England, France, etc.; Puritanism; American Sects; Modern Religious Tendencies; Liberal Christianity.
- [56-7. Special Investigations. A research course into Religious Literature; Archæology; Architecture. Two term hours.]

#### 58 OLD TESTAMENT

#### PROFESSOR MITCHELL

- 58-3. The Hebrew Language. First Semester: the elements of Hebrew etymology, reading and writing in Hebrew. Second Semester: readings from the books of Judges and Samuel, with notes and references on Hebrew syntax.
- 58-6. (F) The Narrative Literature. A comparative study of the historical books to determine their relative value from the literary, historical, and religious standpoint. Two term hours
- 58-7. (s) The Prophetic Literature. An examination of selections from the works of the principal prophets, to ascertain the literary and doctrinal peculiarities of each, and its place in the development of Hebrew prophecy. Two term hours.
- 58-8. (F) The Didactic Literature. The books of Job, Proverbs, and Ecclesiastes, and their significance in the history of Hebrew thought. Two term hours.

- 58-9. (s) The Lyric Literature. Early songs; select psalms of devotional or theological importance; the Song of Solomon and its structure and meaning. Two term hours.
- 58-10. (F) The Ethics of the Old Testament. A survey of the development of moral ideas among the Hebrews, with lectures and papers. Two term hours.
- 58-11. (s) Introduction to the Old Testament. An inquiry into the age, and structure, authorship, and history of the several books, with lectures and papers. Two term hours.
- 58-12. The Theology of the Old Testament. A systematic study of the results of theological thinking among the Hebrews which appear in their Scriptures. Two term hours.

#### 68 NEW TESTAMENT

PROFESSORS MITCHELL AND MCCOLLESTER AND ASSISTANT
PROFESSOR WYATT

68-4. New Testament Greek. Assistant Professor Wyatt

[68-11. (s) Life of Jesus: Beginnings of Christian Church.]

PROFESSOR McCollester

- 68-12. (s) Introduction to the New Testament. An inquiry into the structure, origin, and history of the several books. Lectures and papers.

  One term hour.

  PROFESSOR MITCHELL
- 68-13. (F) The Gospels. A comparative study, the object being a familiar and sympathetic acquaintance with the life and teachings of Jesus-Lectures and papers. Three term hours.

  PROFESSOR MITCHELL
- 68-14. (s) The Acts of the Apostles, as a source of knowledge concerning the beginnings of the Christian Church and the personalities of its founders. Lectures and papers. Two term hours.

PROFESSOR MITCHELL

- 68-15. (S) The Epistles. Select Readings, with especial attention to the conditions under which they were written and the religious and theological development of which they give evidence. Lectures and papers.

  Two term hours.

  PROFESSOR MITCHELL
- 68-16. The Theology of the New Testament. An examination of its component parts in the order of their origin, to ascertain their teaching, direct or indirect, on the various topics of theological thought. Lectures and papers. Two term hours.

  PROFESSOR MITCHELL

A course in the Bible as English Literature (12-10) is given in the College of Liberal Arts by Professor McCollester, and is open to students of the Theological School.

#### 76 APPLIED CHRISTIANITY

#### PROFESSOR SKINNER

- 76-7. (s) Social Psychology. A study of the self as a social product, an analysis of group and race characteristics, and of social conduct. Various authors are studied, such as Ross, Ellwood, Tarde, Le Bon, etc.
- 76-8. Principles and methods of Social Service, and of practical community leadership. The most important phases of social development are studied in their relation to economic and spiritual forces. Various welfare institutions are visited; brief comments are written upon each; students perform specific service under direction. Two hours class work, one hour field work, per term.
- 76-10. (s) Home and Foreign Missions. The aim is to make the student sympathetic with the motives and movements of missions and cognizant of methods. One term hour.
- 76-11. (F) Seminar in Country Church Problems. The country church and its ministry, in relation to rural development. One term hour.
- 76-12. Laboratory Social Work. A course in field investigation with an approved social agency, such as Settlements, Charity Organizations, etc. Assigned reading. Conferences with instructor. Two term hours.
- [76-13. Race Problems. The history of immigration and an examination of its effects at home and abroad. Discussion of plans for Americanization.]

#### 78 RELIGIOUS EDUCATION

#### PROFESSORS SKINNER and McCollester

- **78-1.** (F) Religious Pedagogy. Church, school methods, organization, curriculum, management, and efficiency are studied theoretically and are given practical demonstration. *Two term hours*. PROFESSOR SKINNER
- 78-2. (s) A course in practical Sunday School teaching. The student is acquainted with the materials and curricula of the graded system and uses them in actual teaching under the criticism and supervision of the instructor. Two term hours.

  PROFESSOR SKINNER
- 78-3. (F) Applied Religious Psychology. Various phases of normal and abnormal experience are studied and types of Christian character are analyzed. The validity of religious experience is emphasized.
- 78-4. (F) Pastoral Care. Clerical Life and its Problems, Universalist forms, ceremonies, and government, Art in relation to religious effective ness. Two term hours.

  PROFESSOR MCCOLLESTER

#### 82 HOMILETICS AND PASTORAL CARE

#### PROFESSORS CUSHMAN and McCollester

- 82-1. Introductory Course in Homiletics. (a) Lectures and recitations on the basis of text book, Hoyt's "The Work of Preaching." (b) Sermon Making. Short extempore and written sermons on texts or topics chosen by students or assigned by the instructor. (c) Cultural study of the words and life of Christ as fundamental preparation for preaching. (d) Conferences.
- 82-2. Advanced course in Homiletics. (a) Lectures and recitations on the basis of text book, Hoyt's "The Preacher." (b) The art of preaching. Practice in the making of sermons, and in their delivery in class. (c) Pastoral Care. Studies in the conduct of Public Worship, and of special services on the basis of Dean Leonard's Book of Prayer. Baptism, Confirmation, the Holy Communion, Marriages and Funerals will be considered; also, Parish Calls and other pastoral functions with Gladden's "The Christian Pastor" as a book of reference. (d) Conferences.

#### 86 THEOLOGY

#### PROFESSOR McCollester

- 86-1. (s) Historical Introductions to the general subject of Theology. [86-2. Theology: A survey of the general field of Theology; Modern
- 86-3. Philosophy and History of Universalism: Unitarianism; Congregationalism; Liberal Leaders. Ballou, Channing, Farrar, Emerson. Two hours.
  - 86-4. (F) Systematic Theology.

Conclusions.

#### THE PROFESSION OF THE MINISTRY

Lectures are given by clergymen and educators at frequent intervals on ministerial habits, scientific management of parishes, case work, reading courses, church architecture, Universalist polity, and interdenominational relations.

#### EXPENSES AND PECUNIARY AID

Tuition in the Crane Theological School is one hundred dollars per annum which gives a student a free room in Paige Hall. Students preparing for the Universalist ministry may obtain scholarships (covering tuition and room in Paige Hall) providing they maintain a high grade in their classes. Incidental expenses are not many and board may be obtained at moderate terms.

A registration fee is required of all students entering Tufts College for the first time.

The income from the following scholarships is available for theological students.

- THE GREENWOOD SCHOLARSHIP. \$1,000
  Founded in 1877 by Mrs. Eliza M. Greenwood, of Malden.
  Given to that member of the advanced class in Homiletics who, maintaining a high standard of work as a student, has made in all the work in Homiletics and Oratory the most satisfactory progress.
- THE DOCKSTADER SCHOLARSHIPS. \$10,000

  Founded in 1890 by George A. Dockstader, of New York.

  Appropriated to the aid of needy and worthy students.
- THE HENRY L. BALLOU SCHOLARSHIP. \$1,000
  Founded in 1897 by Susan Ballou, of Woonsocket, R. I.
- THE BRADLEE SCHOLARSHIPS. (2) \$2,000 Founded in 1897 by Caleb D. Bradlee, D.D., of Brookline.
- THE GOLDTHWAITE SCHOLARSHIPS. (2) \$2,000 Founded in 1897 by Willard Goldthwaite, of Salem.
- THE HOLT SCHOLARSHIP. \$1,000 Founded in 1897 by Miss Celia Holt, of Stafford, Conn.
- THE WHITTEN SCHOLARSHIP. \$1,000
  Founded in 1897 by Mrs. Maria F. Whitten, of Cambridge.
- THE SARAH ELIZABETH PERKINS SCHOLARSHIP. \$1,000 Founded in 1898 by James D. Perkins, of Brooklyn, N. Y.
- THE LUCIUS R. PAIGE SCHOLARSHIPS. (2) \$2,000 Founded in 1902 by Lucius R. Paige, D.D., of Cambridge, Mass.
- THE ANN M. PAIGE SCHOLARSHIPS. (2) \$2,000
  Founded in 1903 by Ann M. Paige, wife of Rev. Lucius
  R. Paige, of Cambridge, Mass.

THE JOHN MURRAY SPRAGUE AND ELIZA FLETCHER SPRAGUE SCHOLARSHIP. \$2,000 Founded in 1908 by John M. Sprague. Appropriated to the aid of needy and deserving students, preference being given to any student, otherwise eligible, who is a direct

THE CATHERINE CONANT SCHOLARSHIPS. (4) \$5,000 Founded in 1910 by Mrs. Catherine Conant, of Newark, N. J.

descendant of the donor's father, John Sprague.

The General Convention of Universalists aids students by loan scholarships, not exceeding one hundred and twenty-five dollars a year to any one student, subject always to the recommendation of the Faculty of the Theological School.

Students who are in the regular course are permitted to preach, under the direction of the Faculty, during the year-anda-half preceding their graduation.

Students who have to pay their own way through school find many opportunities at Tufts to earn money—and expenses may be reduced to a low figure.

# THE GRADUATE SCHOOL

CHARLES ERNEST FAY, A.M., LITT.D., Dean

# Standing Committees

EXECUTIVE: President Bumpus, Chairman; Dean Fay and Professor Denison.

REQUIREMENTS FOR DEGREES: Dean Fay, Chairman; Professors Metcalf and Durkee.

# Faculty of the Graduate School

HERMON CAREY BUMPUS, Ph.D., Sc.D., LL.D., PRESIDENT

CHARLES E. FAY, A.M., LITT.D., DEAN Wade Professor of Modern Languages

WILLIAM H. REED, A.M., RECORDING SECRETARY

#### Professors

Arranged in order of their appointment at Tufts College

WILLIAM L. HOOPER, A.M., Ph.D., LL.D. Electrical Engineering

FRANK W. DURKEE, A.M. Chemistry

LEO R. LEWIS, A.M.

History and Theory of Music

FRANK G. WREN, A.M.

Walker Professor of Mathematics

WILLIAM K. DENISON, A.M.

Latin Language and Literature

HENRY C. METCALF, Ph.D.

Jackson Professor of Political Science

WILLIAM R. RANSOM, A.M.

Mathematics

ARTHUR I. ANDREWS, Ph.D.

History and Public Law

KARL SCHMIDT, Ph.D.

Philosophy and Education

LEE S. McCOLLESTER, S.T.D.

Packard Professor of Christian Theology

HERBERT V. NEAL, Ph.D. Zoology

CHARLES H. GRAY, Ph.D. English

# The Graduate School

The Graduate School has control of all advanced work leading to the higher academic degrees.

The advanced elective work offered to undergraduates in any department of the Associated Schools is open to graduate students, and will count for the Master's degree. Graduate courses are arranged with the instructor in whose department the work is to be done, and must be approved by the Faculty of the Graduate School.

#### DEGREES

The degrees offered are Master of Arts and Master of Science. Departments open to candidates are:

ENGLISH
MODERN LANGUAGES
ANCIENT LANGUAGES
PHILOSOPHY AND EDUCATION
HISTORY AND PUBLIC LAW
POLITICAL SCIENCE

MUSIC
MATHEMATICS
CHEMISTRY
BIOLOGY
ELECTRICITY

THE DEGREE OF MASTER OF ARTS will be conferred upon graduates of Tufts College who have received the degree of Bachelor of Arts, or upon graduates of other colleges whose course of study has been equivalent to that required at Tufts College for the degree of Bachelor of Arts, upon the following conditions:

- 1. They must have completed an approved course of advanced study, covering the equivalent of at least thirty term hours, in one or at the most two departments. If two departments are chosen they must be allied.
- 2. This course must be pursued during a residence of not less than one year. For graduates of Tufts College, the condition of residence may be waived by special permission, but the degree cannot then be taken with less than two years of graduate study.
- 3. The candidate must prepare a thesis in the form prescribed by the regulations, and must pass a satisfactory examination under the supervision of a board of three examiners, appointed by the Graduate Faculty at its stated meeting on the Friday following the last Monday in May. The thesis must be presented at least one month before Commencement.

- 4. No subject counted for the bachelor's degree will be counted for the master's degree.
- 5. Application for admission to the Graduate School should be made to the Dean in writing prior to September 20 of the college year in which the degree is to be conferred and the candidate should report for registration on the opening day of the College. If the degree is not taken after the first year of study, a second notice must be given at least three months prior to the Commencement at which the degree is expected. The application must specify the department or departments in which it is proposed to pursue work for a degree.

THE DEGREE OF MASTER OF SCIENCE will be conferred upon Bachelors of Science who have pursued advanced study at Tufts College for one year, under the conditions required of candidates for the degree of Master of Arts; or upon any Bachelor of Science of Tufts College who shall pursue graduate study in absentia for at least two years, or who, as an engineer, shall have continued his scientific researches with marked ability for at least three years, holding in the meantime a position of large responsibility. A thesis will be required.

#### SPECIFIC REQUIREMENTS IN THE SEVERAL DEPARTMENTS

[For a detailed description of the subjects indicated by their numbers in the following statements, see "Departments of Instruction" in the sections of this catalogue devoted to the School of Liberal Arts and (for Electricity) to the Engineering School.]

English.—It is assumed that candidates for the degree of Master of Arts in English will have already laid a good foundation in English composition and the history of English and American literature. The amount of this work, in general, is that required of a "major student" in the department. Unless already covered in undergraduate work, the subjects numbered 12-7, 12-10, 12-13 to 12-18, 12-23 to 12-25, 12-29, and 12-36 may be counted toward the Master's degree, though a higher standard of attainment will be expected than from undergraduates. Part of the work, however, or even the entire work, may consist of a course of independent study of investigative order, under the direction of the department. This may take the form of a discussion of some question in literary history or criticism, or it may consist of an

intensive study of an author or a period. A reading knowledge of German and French is usually necessary.

Modern Languages.—A candidate for the Master's degree in this Department must have completed the equivalent of subjects 1 to 3 in both French and German (32 and 22) and 3B and 4 of the language in which the major part of the work is to be performed. The earlier part of the work for candidates who have not taken the more advanced courses is done with undergraduate classes. Of "elementary" subjects only Italian and Spanish may be taken. Graduate students registered in other departments are admitted to such modern language classes as their proficiency may warrant.

ANCIENT LANGUAGES.—A candidate for the Master's degree in Greek or Latin must have completed for Greek subjects 62-1, 62-2, 62-3, and 62-4 or 62-5; for Latin, 52-1, 52-2, 52-3 or 52-4, and 52-5. It is desirable that when the degree is sought in one of these languages the other should be taken as a collateral subject. Unless anticipated as undergraduate work, Greek 62-4, 62-5, 62-7, Latin 52-3, 52-4, 52-6, and Classical Archæology 28-1, to 28-8, may be counted towards the higher degree. Work will be done either in advanced classes with undergraduates or on special lines of investigation approved by the instructor. The thesis will embody the results of the investigation of some author or period, or of some philosophical or archæological subject. A reading knowledge of French and German is indispensable.

Philosophy.—Some of the prerequisites for advanced work in Philosophy can be stated: a reading knowledge of French and German; Philosophy 16-1 and 16-2, or their equivalent, and one at least of the following three courses: 16-3, 16-8, 16-55, or their equivalent; others depend on the line of work chosen. For example, advanced work in Logic presupposes a knowledge of Mathematics and possibly of Physics. Special requirements will be stated to the student when the field of research is chosen.

HISTORY AND PUBLIC LAW.—Before beginning graduate work in History and Public Law, the candidate must have completed History 36-1 and 36-2, and Public Law 46-1 or 46-2, or their equivalent. The advanced subjects enumerated in the catalogue, in so far as they are suited to individual needs, may be offered for the higher degrees, but it is expected that much of the candidate's work will consist of special studies pursued, under the direction of the department, and of an independent investigation of a definite subject, the results to be embodied in the required thesis. A working knowledge of French is essential, and of German is desirable.

POLITICAL SCIENCE.—When work is done in residence, the advanced courses, such as Business Organization and Management, Problems of Labor and Capital, Railroads, Finance, and Sociology, which have not been counted in undergraduate work, will be counted for the Master's degree. When residence is waived, the work will cover two years of research with stated conferences, the results to be embodied in the required thesis. A good reading knowledge of French and German is desirable, and may in certain lines of work be necessary.

Music.—Graduate study in Music may follow one of three lines: Composition, History, or Criticism. The last-named includes advanced work in Musical Appreciation. In preparation for Composition the subjects numbered 38-9 and 38-10, or their equivalent, must have been completed, together with a year's work either in 38-25 or in the purely technical subjects. A reading knowledge of French and German is indispensable. The required thesis will consist (in Composition) of a sonata or a work of similar scope, or (in History or Criticism) of a paper on an assigned topic.

MATHEMATICS.—Graduate students in Mathematics must have acquired a working knowledge of the calculus, and may offer as part of their work for the Master's degree any of the subjects given by the department except 14-1, 14-4, 14-5 and 14-6, but subjects 14-7, 14-9 and 14-10, or their equivalent, must be included.

Candidates will hold themselves in readiness to be examined at the end of their studies upon any topics treated in the four subjects noted as exceptions, as well as upon work offered for the degree.

Biology.—Before beginning graduate work in Biology, the student must have a good knowledge of the elements of plant and animal morphology and physiology and must have completed subjects 44-3 and 44-7, or their equivalent. A reading knowledge of scientific French and German is also necessary. The work offered for advanced degrees is in the line of plant and animal morphology.

CHEMISTRY.—Before beginning graduate work in Chemistry, subjects 35-1, 35-2 and 35-3, or their equivalent, must have been completed. Subjects 35-4 to 35-17 inclusive may be counted toward the Master's degree if they have not already been counted as a part of undergraduate work. A good reading knowledge of German is desirable, and in certain lines of work necessary.

ELECTRICITY.—As a preparation for graduate work in Electricity the candidate must have a good mathematical foundation, including a working knowledge of differential equations, and must have credit in Physics 31-1, 31-2, 31-8, and 31-9, or their equivalent. Of the thirty term hours required, nine may be used in the preparation of the required thesis.

#### **EXPENSES**

The tuition fee for the whole course for the degree of Master of Arts, or Master of Science, is *one hundred dollars*, of which one half is payable in advance. The registration fee of five dollars is required of all students registering at Tufts College for the first time.

#### SCHOLARSHIPS

In each department offering graduate work the Trustees of Tufts College have established one scholarship which gives free tuition. The incumbent is expected to devote himself exclusively to advanced study.

These scholarships are awarded by the Graduate Faculty, on recommendation of the heads of departments concerned, at or before the beginning of the year in which they are to be conferred. Applications must be made to the Dean of the Graduate School.

# TWO-YEAR PRE-MEDICAL COURSE

FRANK GEORGE WREN, A.M., Dean

## Standing Committees

CURRICULUM: Dean Wren, Chairman; Professors Ashley and Bates, Messis. Shaw and Swett.

Promotions: Dean Wren, *Chairman*; Professors Ashley and Seavey, Messrs. Cook and Swett.

#### Calendar of the Pre-Medical Course

#### 1918

Jan. 2. Christmas recess ends, Tuesday Evening. Feb. 4. Second half-year begins, Monday, 9 A.M.

FEB. 22. Washington's Birthday. Exercises are suspended.

APRIL 17. Spring recess begins, Wednesday Evening.

APRIL 22. Spring recess ends, Sunday Evening.

MAY 30. Memorial Day. Exercises are suspended.

JUNE 8, 10, 11, 12, 13. Final examinations.

JUNE 17-22. Entrance examinations conducted by the College Entrance
Examination Board. Application blanks may be obtained
from the Secretary of the Board, 431 West 117th St., New
York, N. Y.

JUNE 20. Registration begins.

SEPT. 16. Examinations for the removal of conditions.

SEPT. 16, 17, 18. Examinations for entrance given at Ballou Hall, Tufts College. For the schedule see "Admission by Examination."

OCT. 3. Registration closes 10 A.M. Thursday.

Oct. 3. Pre-Medical Course begins.

Oct. 12. Columbus Day. Exercises are suspended.

Nov. 27. Thanksgiving recess begins, Wednesday Evening.

DEC. 2. Thanksgiving recess ends, Sunday Evening.

DEC. 21. Christmas recess begins, Saturday, I P.M.

#### 1919

JAN. 2. Christmas recess ends, Wednesday Evening.

FEB. 3. Second half year begins, Monday, 9 A.M.

FEB. 22. Washington's Birthday. Exercises are suspended.

APRIL 16. Spring recess begins Wednesday Evening.

APRIL 21. Spring recess ends, Sunday Evening.

MAY 30. Memorial Day. Exercises are suspended.

June 6, 7, 9, 10, 11, 12. Final Examinations.

# Faculty of the Two-Year Pre-Medical Course

(The address is Tufts College, Mass., unless otherwise indicated. The names below comprise the Instructing Staff for the first year of the course which is the only one given in 1917-18.)

Name of Parties and Address an
Administrative Officers
HERMON CAREY BUMPUS, Ph.D., Sc.D., LL.D 8 Professors Row President
FRANK GEORGE WREN, A.M 65 Talbot Ave.  Dean of the Faculty of the School of Liberal Arts
FLORENCE MIRICK ROSS Dorchester  Assistant to the Dean
Professors
RAYMOND HARMAN ASHLEY, B.S., A.M. Ph.D 8 Ossipee Rd.,  Chemistry W. Somerville
GEORGE ANDREW BATES, M.Sc., D.M.D Auburndale Biology
FRANK ELIAS SEAVEY, A.M 45 Sawyer Ave.  English
Instructors
JAMES ANTHONY BRADLEY, A.B 35 Pearl St., Medford Chemistry
HAROUTIOUN HOVANS CHAKMAKJIAN, A.B 5 Blossom St.  Chemistry Arlington Heights
LEROY JAMES COOK, A.M
CHARLES GOTT, A.M

ARTHUR LEWIS GREELEY, A.B. . . . 20 Wescott St., Dorchester

FRANCIS O'MEARA, M.S. . . . . . . . . . . . 72 Mapleton St., Brighton

. . 45 Sawyer Ave.

SHIRLEY WILCOX HARVEY, A.B. . . . . . . . .

ETHEL MARR McCALLUM . . . . . .

Chemistry

English

English

Chemistry

EDWIN ADAMS SHAW, A.M 63 College Ave., West Somervill
Mathematics
FRANCIS HUNTINGTON SWETT, A.M 28 Mechanic St., Bosto Biology
GEORG VAN WIEREN So. Framingham German
Assistants
GEORGE FRANCIS CALDICOTT Milfor Biology
DAVID HOWARD GIBSON
MAHLON GILMAN KNOWLES, B.S Swampscot English
FRANKLIN JAMES MINAH 28 Mechanic St., Boston Biology
GEORGE WILSON ROOD W. Somervill  Biology

For several years so-called medical preparatory courses have been given at the College. These are regular four-year courses leading to the bachelor's degree, and they will be continued, for the Trustees believe that a full college course is the best preparation for those who are to choose the profession of medicine.

There are, however, many students, young men and women, who cannot afford the time or the expense requisite for the attainment of a college degree. The Two-Year Pre-Medical Course herein described is designed to meet, in a practical way, the needs of this class, but it should be distinctly understood that the College will not look with favor upon those who comply merely with a minimum of the requirements for admission and yield a low grade of work. The College expects earnestness and proficiency from all its students, and will add to the quantity and quality of the work herein described as it may feel is to the best interests of the student, the School, and the profession.

# Two-Year Pre-Medical Course

The Association of American Medical Colleges, of which Tufts College Medical School is a member, has voted that students may be admitted to medical schools of "Class A" under the following conditions:

- (a) The student must have completed a four-year course in an accredited high school and
- (b) He must have taken at least two years of pre-medical work in an accredited college or university. This course must include Physics, Chemistry, Biology and either French or German.

The Trustees of Tufts College have arranged the following Two-Year Pre-Medical Course in accordance with this action of the Association of American Medical Colleges.

#### REQUIREMENTS FOR ADMISSION

Admission to the first-year class may be obtained in one of two ways:

(1) By presenting a diploma and a transcript of record from an accredited high school or academy:

The transcript of record must show adequate preparation in certain subjects falling in two groups, known respectively as the Required and the Elective Group. In these groups the term "unit" represents a year's study in the specified subject and is the equivalent of approximately a quarter of a full year's work.

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No subject offered in the Required Group can be counted in the Elective Group.

In addition to the eight units of the Required Group candidates for admission must also present subjects chosen from the following Elective Group equivalent to seven units.

#### The Elective Group, 7 Units

Units	Units
Greek · · · 2 or 3	Freehand Drawing ½
Latin 2, 3, or 4	Shop Work $\frac{1}{2}$ to 2
French 2 or 3	Musical Appreciation . ½
German 2 or 3	Music (Harmony) ½
Chemistry 1	Algebra A2
Physics	Advanced Algebra ½
Biology 1	Solid Geometry ½
Botany	Trigonometry $\dots$ $\frac{1}{2}$
Zoology	English History 1
Geology or Geography . 1	Ancient History I
Mechanical Drawing 1	American History and Civil Government 1

# (2) By passing examinations:

Students who desire to satisfy the above requirements may take the examinations either in June or in September, or a part in June and a part in September.

The June examinations, arranged by the College Entrance Examination Board, will be given June 17 to 22, 1918, at Robinson Hall, Tufts College, Mass., and elsewhere, as announced by the Board. All applications for June examinations must be addressed to the Secretary of the College Entrance Examination Board, 431 West 117th Street, New York, N.Y., and the student intending to take the Board examinations should make his plans known to the Secretary at an early date, if possible prior to May 1, in order to comply with all of the conditions imposed by the Board.

The September examinations are arranged by Tufts College and will be given September 16 to 18, 1918, at Ballou Hall, Tufts College, Mass. On the day of their first examination applicants for the September examinations are required to register at the office of the Registrar at Tufts College and pay an examination fee of \$5.00.

The schedule of examination dates for September, 1917, is as follows:

SEPT. 16. Elementary, Intermediate, and Advanced French, 9 to 11;
Elementary, Intermediate, and Advanced German, 11 to 1;
Elementary and Advanced Greek, Advanced Algebra and
Trigonometry, 2 to 5; \* American History, 2 to 4; English
History, 4 to 6.

SEPT. 17. Algebra, 9 to 10.30; English, 10.30 to 12.30; Plane Geometry,

2 to 4; Physics, 4 to 5.

SEPT. 18. Elementary, Intermediate, Advanced Latin, and Drawing, 9 to 12; Solid Geometry, 9 to 11; Biology, Botany, Geography, Geology, Zoology and Economics, 11 to 1; Ancient History, 2 to 4; Chemistry, 4 to 5.

The requirements are well known to the principals of all secondary schools. Details will be sent on application.

#### EXPENSES

A fee of five dollars is payable at the time of registration.

The tuition fee of *one hundred and twenty-five dollars* is payable on the opening day, and unless otherwise arranged must be paid in full before October 1.

If desired, however, this amount may be paid in two instalments, in which case, an additional charge of five dollars is made and the fees are then paid as follows:

First payment, seventy dollars, payable on or prior to the opening day.

Second payment, *sixty dollars*, payable on or before February 1. Laboratory and anatomical materials are supplied at cost.

#### APPLICATION AND REGISTRATION

A student who intends to enter the Two-Year Pre-Medical Course must apply to Frank G. Wren, Dean, 416 Huntington Avenue, Boston, Mass. Application blanks will be mailed upon request.

Registration for the session 1918–19 will begin at the Medical School Building, 416 Huntington Avenue, Boston, Massachusetts, on Thursday, June 20, 1918, at 9 A.M. and will continue until Thursday, October 3, at 10 A.M. College work will begin on the latter date and continue according to the calendar.

<sup>\*</sup>Persons desiring to be examined in Medieval or Modern History are requested to confer with the examiner.

## Course of Instruction

The arrangement of the two-year course at Tufts is intended to satisfy the requirements for admission as outlined by the American Medical Association, and at the same time to develop the mind of the student in a broad way. The following eschedule of subjects has been proposed:

#### First Year

I'II'SI DETTIESTET	First	Semester
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Biology (Vertebrate Zoology)

Chemistry (General)

English

French or German

Mathematics

#### Second Semester

Biology (Vertebrate Zool-

ogy)

Chemistry (General and

Qualitative)

English

French or German Elementary Economics

#### Second Year

Biology (Principles)

Chemistry (Quantitative and

Organic)
Physics
Literature
Psychology

Biology (Embryology) Chemistry (Quantitative

and Organic)
Physics

Literature

History and Civics

The description of these subjects is given under "Departents of Instruction."

Only the First Year of the course will be given during the year 17-18.

## Departments of Instruction

#### BIOLOGY

The courses in Biology are planned to give training in methods of exact observation and deduction and to give the fundamentals in this branch of science so necessary to the medical student. Especial attention will be given to the higher forms, and in so far as is possible, types which have a direct bearing upon the health and economy of man, as viewed from the medical standpoint, will be chosen for study.

First Year. Vertebrate Zoology — Principles of living matter shown in the fundamental properties of protoplasm, structure of tissues, organs, and organism. A systematic survey of the vertebrates with a comparative study of their structure as a key to human anatomy.

Two lectures and four hours of laboratory work each week throughout the year.

Second Year. Principles of Biology — Plant and inverte brated animal forms will be considered, with emphasis on those playing a part in the normal and pathological activities of the human body.

Iwo lectures and four hours of laboratory work each week throughout the first semester.

Second Year. Embryology — An introduction to the principles of vertebrate development in direct preparation for the work of the medical course.

Two lectures and four hours of laboratory work each week throughout the second semester.

#### CHEMISTRY

This course consists of lectures, laboratory exercises and recitations. The usual college course is followed, and the subject developed in a logical manner with standard textbooks of college grade as a basis. The lectures are parallel with the laboratory exercises which strive to maintain the connection between theory and observed fact. The recitations afford oppor-

tunities for clearing up what may seem obscure, while the lectures are formal and accompanied by lecture-table demonstrations.

First Year. General Chemistry. — Theoretical and descriptive inorganic chemistry and qualitative analysis.

Four lectures or recitations, and nine hours of laboratory work each week throughout the year.

Second Year. The elements of quantitative analysis, including the theory and practice of gravimetric and volumetric analysis. The year's work will also include organic chemistry to familiarize the student with the typical compounds of carbon and their more important derivatives. Special attention is paid to the preparation for the work in Physiological Chemistry.

Three lectures or recitations, and four hours of laboratory work each week throughout the year.

#### MODERN LANGUAGES

First Year. The courses in French and German are given in order to enable the student ultimately to acquaint himself with the literature of medicine and to read scientific publications in French and German. Elementary, intermediate and advanced subjects are offered in each department, so that the character of the work may be adapted to the qualifications of the individual student. Grammatical principles are reviewed and literal translations with a clear understanding of the fundamental meaning of words are insisted upon.

Three recitations each week throughout the year.

#### ENGLISH

First Year. The purpose of the English course is first, to mpress on the student the importance of good English; second, to train in exact thinking; third, to develop the power of expression; and fourth, to encourage the habit of reading. The forms of discourse are taken up in weekly lectures, and errors are discussed at monthly conferences held with individual tudents. Papers written outside the class are required weekly, and papers written in class are required from time to time.

Three recitations each week throughout the year.

#### MATHEMATICS

First Year. This course is intended to review the mathemathics of the secondary school with special reference to the medical profession.

The elements of accounting as applied to the keeping of office records will comprise a portion of the prescribed work.

Three recitations each week throughout the first semester.

#### ELEMENTARY ECONOMICS

First Year. This course is designed especially for students preparing for the study of medicine. It aims at a comprehensive study of the elements of economics with special reference to present day economic and social problems.

Three recitations each week throughout the second semester.

#### PHYSICS

Second Year. The subjects of mechanics, sound, heat, light, and electricity, are covered. As much as possible of the mathematical part of physics is omitted; but special attention is given to topics peculiarly important to the student of medicine. Among these may be mentioned: capillarity, osmosis, diffusion, high frequency electric currents, X-rays, and radio-activity.

The laboratory work is intended to familiarize the student with simple physical apparatus, and the fundamental laws of physics. Written reports upon this work are required. The recitations are devoted to extending this study; and offer an opportunity for frequent short examinations. The lectures treat principally of extensions of the subject which cannot be conveniently studied in the laboratory.

The point of view of the medical student is kept prominently in mind throughout the course.

Three lectures or recitations and four hours of laboratory work throughout the year.

#### LITERATURE

Second Year. Historical outline of the development of literature and reading of representative masterpieces. The literature and history of medicine will comprise a portion of the subject.

Three recitations each week throughout the year.

#### **PSYCHOLOGY**

Second Year. An elementary course with normal human psychology as the principal subject: Abnormal and supernormal phenomena will be studied in so far as they shed light on normal psychology.

Three lectures or recitations each week during the first semester.

#### HISTORY AND CIVICS

Second Year. Topics in the history of the United States with special reference to the history of the last fifty years and to contemporary problems.

State and community government with opportunities for direct observation.

Three lectures or recitations each week during the second semester.

#### GRADUATION

Students graduating from the Two-Year Pre-Medical Course are admitted to the Medical School without further examinations.

Before a certificate of graduation can be given, students must fulfill the following requirements:

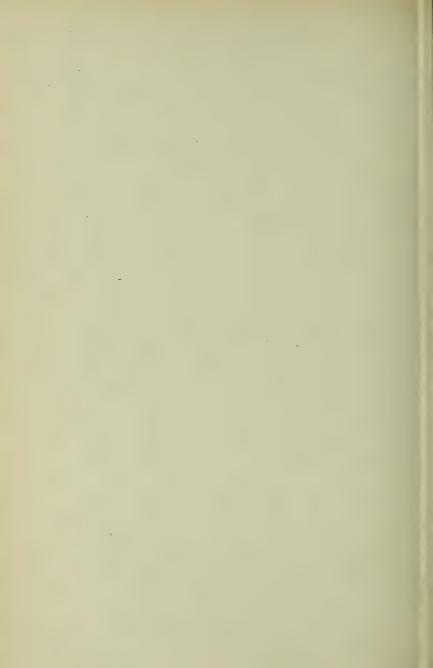
They must have paid all fees.

They must have passed all the required examinations, and have performed the required amount of laboratory work.

They must have completed the full course of pre-medical study.

The Faculty must be satisfied of the good moral character of the student.

The College reserves the right to accept and retain students as it may elect. Regulations are subject to change without notice.



## PART II

# THE MEDICAL AND DENTAL SCHOOLS 416 Huntington Avenue, Boston, Mass.

TUFTS COLLEGE MEDICAL SCHOOL (Giving the degree of M.D.)

TUFTS COLLEGE DENTAL SCHOOL (Giving the degree of D.M.D.)

## Calendar — 1918

_	JANUARY						MAY							SEPTEMBER								
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### Calendar of the Medical and Dental Schools

#### 1918

- JAN. 1. Christmas recess ends, Tuesday Evening.
- FEB. 4. Second half-year begins, Monday, 9 A.M.
- Feb. 22. Washington's Birthday. Exercises are suspended.
- APRIL 17. Spring recess begins, Wednesday Evening.
- APRIL 21. Spring recess ends, Sunday Evening.
- MAY 30. Memorial Day. Exercises are suspended.
- JUNE 16. Baccalaureate Sermon, Sunday, 4 P.M. (Goddard Chapel).
- JUNE 17. Annual Commencement, Monday.
- June 17-22. Entrance Examinations conducted by the College Entrance Examination Board. Application blanks may be obtained from the Secretary of the Board, 431 West 117th St., New York, N. Y.
- JUNE 20. Registration begins.
- SEPT. 16. Examinations for Advanced Standing and for the removal of Conditions.
- SEPT. 16, 17, 18. Examinations for entrance given at Ballou Hall, Tufts College.
- SEPT. 23. Medical School year begins Monday. Registration closes, 5 P.M.
- SEPT. 26. Dental School year begins, Thursday. Registration closes, 5 P.M.
- Oct. 12. Columbus Day. Exercises are suspended.
- Nov. 27. Thanksgiving recess begins, Wednesday Evening.
- Dec. 1. Thanksgiving recess ends, Sunday Evening.
- DEC. 21. Christmas recess begins, Saturday, I P.M.

#### 1919

- JAN. 1. Christmas recess ends, Wednesday Evening.
- FEB. 3. Second half-year begins, Monday, 9 A.M.
- FEB. 22. Washington's Birthday. Exercises are suspended.
- APRIL 16. Spring recess begins, Wednesday Evening.
- APRIL 20. Spring recess ends, Sunday Evening.
- MAY 30. Memorial Day. Exercises are suspended.
- JUNE 15. Baccalaureate Sermon, Sunday, 4 P.M. (Goddard Chapel).
- JUNE 16. Annual Commencement, Monday.

## Tufts College Medical and Dental Schools

The Tufts College Medical School was established in Boston in 1893 and the Dental School, formerly the Boston Dental College became a part of Tufts College in 1899. Both are administered by the Trustees of Tufts College and are co-educational, women and men being admitted upon the same terms.

#### THE MEDICAL AND DENTAL BUILDINGS

416 Huntington Avenue, Boston, Mass.

The buildings—at which all exercises are conducted except those given to upper classmen at the hospitals—are at present two in number.

The main building is equipped solely for the teaching of Medicine and Dentistry and subjects connected therewith. There are seven lecture rooms. On the second, third, and fourth floors, extensive laboratories are provided which give excellent facilities for teaching. Private research laboratories are connected with each general laboratory.

The increase in enrollment has necessitated the erection of a second building, provided with laboratories, recitation rooms, and a lecture hall, and designed for the use of the Medical and Dental, and the Pre-Medical classes.

The buildings may be reached by Huntington Avenue Subway cars, except those on the Roxbury and Dorchester lines.

#### MEDICAL CLINICAL FACILITIES

Boston, the largest city in New England, offers unusual facilities to the student of medicine. The amphitheatres of the Boston City Hospital, the Massachusetts General Hospital, and the Massachusetts Charitable Eye and Ear Infirmary and other hospitals are open to students, and opportunity is thus afforded for witnessing a great variety of medical and surgical cases.

Clinics available to medical students are held at the institutions given in the following list, and opportunities are also offered at various private hospitals.

Boston City Hospital 818 Harrison Ave., Boston
Boston Consumptive Hospital O. P. D 13 Dillaway St., Boston
Boston Consumptive Hospital Mattapan
Boston Dispensary Corner of Bennett and Ash Sts., Boston
Boston State Hospital (Psychopathic Dept.) . 74 Fenwood Rd., Boston
Carney Hospital Old Harbor St., South Boston
Jewish Women's Hospital Assoc. (Maternity Clinic)
34 Chambers St., Boston
Mass. Charitable Eye and Ear Infirmary 233 Charles St., Boston
Massachusetts General Hospital Blossom St., Boston
Massachusetts School for Feeble-minded Waverley, Mass.
North Reading State Sanatorium North Wilmington
Robert Brigham Hospital Parker Hill Ave., Boston

#### DENTAL CLINICAL FACILITIES

The clinical advantages offered dental students are exceptional. In addition to the work in the School Infirmary, students are assigned to the dental clinics at the Boston Dispensary (Dr. C. M. Proctor), the Waverley Hospital (Dr. A. G. Richburg) and the Forsyth Dental Infirmary for Children (Dr. L. B. Willey). In these institutions students receive practical instruction under the direction of officers of the School.

Further opportunities for instruction are furnished by the clinics and operations at the large hospitals of the city. Numerous operations upon the face and oral cavity are performed before students, and all connected with the School are urged to avail themselves of the facilities thus offered.

#### LIBRARIES

The students of these Schools have free access to the Library of Tufts College, and to the Boston Public Library.

#### **EXPENSES**

A fee of *five dollars* is paid at the time of registration and is non-returnable.

A tuition fee of one hundred and fifty dollars is payable on the opening day.

If desired, the tuition may be paid in two instalments, in which case an additional charge of five dollars is made, and the fee is then paid as follows:

First payment: — Eighty dollars, payable on or before the opening day.

Second payment:— Seventy-five dollars, payable on or before January 15.

No student will be admitted to the exercises of the first halfyear who has not first paid his registration fee and at least the "First Payment," and no student will be admitted to the exercises of the second half-year who has not paid his fees in full.

Before graduation students are charged two dollars to defray the cost of the diploma.

Students leaving either School have no claim for tuition paid.

The student is charged the cost price of anatomical material.

Students are charged five dollars for material regularly consumed in the chemical laboratory. In addition a deposit of two dollars, subject to adjustment, is required to cover the cost of breakage.

Students who have failed in a subject are required to pay a fee of five dollars for re-examination.

In addition to the expenses mentioned above, dental students must provide their own personal equipment (dental engine, tools, instruments, etc.) which may be used in their offices after graduation. The cost of this equipment will be approximately fifty dollars during the first year, one hundred and twenty-five dollars during the second year and sixty dollars during the two remaining years.

The expenses of living in Boston need not exceed those in small cities and villages. Good rooms, including heat and light,

may be obtained in the vicinity of the Schools for \$3.00 a week and upwards.

#### REGISTRATION

The registration period for the session 1918–19 will begin at the Medical-Dental Building, 416 Huntington Avenue, Boston, on Thursday, June 20, 1918, at 9 A.M. The Medical registration will end Monday, September 23, 1918, at 5 P.M., and the Dental registration will end Thursday, September 26, 1918. Registration is conducted at the Medical-Dental Building only, and must be made in person.

#### SESSIONS OF THE SCHOOLS

The Medical school-year will begin on Monday, September 23, 1918, and the Dental school-year will begin on Thursday, September 26, 1918. Intermissions and other details are given in the calendar.

#### TERM EXAMINATIONS

Regular examinations for promotion and for graduation are held at the end of each course.

In all examinations each student must register by signing his name on the registration blank provided by the Secretary for that purpose.

At the end of each session a certificate of his standing for the year is sent by mail to each student. No marks will be sent or credit given to any student who is in arrears with the Bursar.

#### PROMOTION

Students who have passed the requirements for admission and the examinations of the first-year class are, on recommendation of the Faculty, promoted to the second-year class, and so on class by class.

#### **FAILURES**

Students who fail in any course must present themselves for re-examination at the next following regular examination.

Before taking a re-examination, students must make special registration with the Secretary and pay a re-examination fee of five dollars. Students who have failed in their re-examinations must repeat the course and make payment for the course accordingly. If they fail after repeating the course they will forfeit their registration.

#### GRADUATION

Before the degrees of Doctor of Medicine or Doctor of Dental Medicine can be conferred, the candidates must fulfill the following requirements:

- r. They must have paid all charges including the cost of diploma.
- 2. They must furnish a certificate that they are twenty-one years of age.
- 3. They must have passed all the required examinations, and have performed the required amount of laboratory and clinical work.
- 4. They must have satisfied the heads of all departments of their ability to meet satisfactorily the requirements of the profession.
- 5. They must have attended for four college years some accredited medical or dental college, the last of which must have been at this Medical or Dental School as members of the fourth-year class.

#### HONORS

Students who have attended either one of these Schools for four years, and have obtained an average of ninety per cent. in their first examinations, shall be eligible to "summa cum laude," and those who have obtained an average of eighty per cent. shall be eligible to "cum laude."

Students who have failed in any examination are not eligible for honors.

#### COMMENCEMENT

Degrees are publicly conferred on Commencement Day at Goddard Chapel, Tufts College.

The College reserves the right to accept and retain students as it may elect. Requirements and regulations are subject to change without notice.

# Admission Requirements for the Medical and Dental Schools

#### THE MEDICAL SCHOOL

The following requirements for admission to the Medical Course leading to the degree of Doctor of Medicine are in accordance with the rules which, as adopted by the Association of American Medical Colleges, control admission to medical schools of "Class A."

Admission to the first-year class may be obtained in two ways. In either case the applicant should file an application blank.

### 1. For Those Having Collegiate Degrees

The candidate for admission must present satisfactory evidence that he is a graduate of an accredited college or university and has received the bachelor's degree. He must have had courses in Physics, Biology, Chemistry, and a Modern Language, each sufficient in amount to equal at least that required by the Council of Medical Education of the American Medical Association, and of the Regents of the University of the State of New York.

After January 1, 1918, the Medical School must require for admission not less than the equivalent of two years of instruc-

tion in a college of liberal arts and science after the completion of an approved four-year high school course and eight years of elementary preparation. The two years of college instruction must be given during at least 15 week hours each, and must include Chemistry 3, Physics 3, Biology 3, English 3, and a Modern Language 3 (French, German, Spanish, or Italian).

A student entering Tufts College as a freshman may combine his collegiate and medical school courses so that in seven years he can take both his bachelor's and his doctor's degrees.

Work for the first three years is pursued in the School of Liberal Arts, and for the remaining four in the Medical School. At the end of the fourth year the bachelor's degree may be conferred, and at the end of the seventh year the degree of Doctor of Medicine.

## 2. For Those Without Collegiate Degrees.

The candidate for admission in September, 1918, must present evidence that he has completed a Pre-Medical Course of at least two years' work in an accredited college or university, including Physics, Chemistry, Biology, and German or French courses.

#### THE DENTAL SCHOOL

The requirements for admission to the course leading to the degree of Doctor of Dental Medicine are governed by the National Association of Dental Faculties of which the Tufts College Dental School is a member.

Admission to the first-year class may be obtained in one of two ways:

(1) By presenting a diploma and a transcript of record from an accredited high school or academy:

The transcript of record must show adequate preparation in certain subjects falling in two groups, known respectively as the Required and the Elective Group. In these groups the term "unit" represents a year's study in the specified subjects and is the equivalent of approximately a quarter of a full year's work.

		Re	qı	1i	red	1 (	3rc	u	p,	8	U	ni	ts				Units
English							٠				•11		٠				3
Foreign	Lan	ıgu	ag	е	(el	en	nei	nta	ary	7)							2
History																	
Algebra	Αı			•		٠											I
Plane G																	

No subject offered in the Required Group can be counted in the Elective Group.

In addition to the eight units of the Required Group, candidates for admission must also present subjects chosen from the following Elective Group equivalent to seven units.

#### Elective Group, 7 Units

	47.
Units	Units
Greek 2 or 3	Freehand Drawing 13
Latin 2, 3, or 4	Shop Work 1 to 2*
French 2 or 3	Musical Appreciation 1
German 2 or 3	Music (Harmony) ½
Chemistry I	Algebra A2
Physics	Advanced Algebra 1
Biology I	Solid Geometry ½
Botany I	Trigonometry 1
Zoology I	English History 1
Geology or Geography 1	Ancient History 1
Mechanical Drawing . 1*	American History and
9	Civil Government I

## (2) By passing examinations:

Students who desire to satisfy the above requirements may take the examinations either in June or in September, or a part in June and a part in September.

The June examinations, arranged by the College Entrance Examination Board, will be given June 17 to 22, 1918, at Robinson Hall, Tufts College, Mass., and elsewhere, as announced by the Board. All applications for June examinations must be addressed to the Secretary of the College Entrance Examination Board, 431 West 117th Street, New York, N. Y., and the student intending to take the Board examinations should make his plans known to the Secretary at an early date, if possible prior to May 1, in order to comply with all of the conditions imposed by the Board.

The September examinations are arranged by Tufts College and will be given September 16 to 18, 1918, at Ballou Hall,

<sup>\*</sup>A total of not more than two units in three subjects.

Tufts College, Mass. On the day of their first examination applicants for the September examinations are required to register at the office of the Registrar at Tufts College and pay an examination fee of \$5.00.

The schedule for examination dates for September, 1918, is as follows:

- SEPT. 16. Elementary, Intermediate, and Advanced French, 9 to 11;
  Elementary, Intermediate, and Advanced German, 11 to 1;
  Elementary and Advanced Greek, Advanced Algebra and
  Trigonometry, 2 to 5; \*American History, 2 to 4; English
  History, 4 to 6.
- SEPT. 17. Algebra, 9 to 10.30; English, 10.30 to 12.30; Plane Geometry, 2 to 4; Physics, 4 to 5; Drawing, 4 to 6.
- SEPT. 18. Elementary, Intermediate, and Advanced Latin, 9 to 12; Solid Geometry, 9 to 11; Botany, Zoology, Biology, Geology and Economics, 11 to 1; Ancient History, 2 to 4; Chemistry, 4 to 5.

Although the requirements are well-known to the principals of all secondary schools, a detailed statement will be sent on application.

## ADMISSION TO ADVANCED STANDING AND REMOVAL OF CONDITIONS

Students who have taken courses in other accredited dental schools may be admitted to advanced classes upon presenting satisfactory credentials or by examination.

Examinations for admission to advanced standing and for the removal of conditions are given at the Medical-Dental Building, on a schedule arranged by the Secretary, and begin on Monday, September 16, 1918.

Students from other colleges intending to take examinations for admission to advanced standing and those who desire to remove conditions are required to notify the Secretary on or before Saturday, September 14, 1918.

Each student must register by signing his name on the registration blank provided for the purpose at the time of the examination. If a student fails to register in this manner, he will receive no credit for his examination.

<sup>\*</sup> Persons desiring to be examined in Medieval or Modern History are requested to confer with the examiner.

## MEDICAL SCHOOL

CHARLES FAIRBANK PAINTER, A.B., M.D., Dean FRANK GEORGE WHEATLEY, A.M., M.D., Vice-Dean FRANK EUGENE HASKINS, Ph.G., M.D., Secretary

### Standing Committees

The Dean, Vice-Dean and the Secretary of the Medical School are members of all standing committees, ex officiis.

ADMINISTRATION. —The President, Drs. Lahey, and Leary.

PROMOTIONS. — Drs. Ames, Bates, Friedman, Lahey, and Leary.

## Officers of Instruction and Government of The Medical School

The post-office address is Boston, Mass., unless otherwise indicated.

#### Administrative Officers

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Applied Therapeutics

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ı	RUTH WEISMAN, '20
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Representing the Treasurer
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Clerk to the Secretary
MARION V. WILSON 17 Egerton Rd., Arlington
Stenographer
ETHEL M. MELVEN
Stenographer
GEORGE E. TOMLINSON 204 Huntington Ave Store-Keeper

# Departments of Instruction in the Medical School

It is the plan of this course, which requires four years of residence, to correlate the classroom work of the first two years with the practical hospital experience of the third and fourth years, leading thus to a well-rounded medical and surgical training. The morning work of the fourth year is largely clinical, the students being assigned in sections for practical work in Hospital and Out-Patient Clinics.

#### ANATOMY

Dr. SULLIVAN

Dr. NOLEN

Dr. HEPBURN

The anatomical laboratory is equipped with charts, models, and regional dissections for demonstrations. A departmental library is maintained for the students.

Descriptive Anatomy. This is a laboratory course on the cadaver. Each student dissects a lateral half of the body. Lectures, demonstrations, and recitations supplement the laboratory work.

Applied Anatomy. It is planned to give a course which will correlate the descriptive anatomy with clinical work. This course will require ten hours per week for one half-year.

### Statement of Expenses Incidental to Work in Anatomy

Dissecting material \$15.00 Laboratory coat \$1.25 Dissecting instruments \$5.00-\$8.00 Text-books \$7.00-\$15.00 Bone deposit \$5.00

#### HISTOLOGY

Dr. BATES

Dr. ADAMS

Dr. SPRAGUE

The course in Histology is carried on during the first semester of the first year. It consists of lectures and laboratory work in microscopic anatomy.

#### PHYSIOLOGICAL CHEMISTRY

Dr. Overlander

Dr. REIS

Dr. THORPE

Mr. BRADLEY

Physiological Chemistry, the department of Biological Chemistry which deals with the normal body, is considered in the first year. The study of chemistry of pathological conditions is reserved for the second year.

The course covers carbohydrates, proteins, fats and normal milk, saliva, bile, blood, gastric fluid, pancreatic fluid, urine, and feces.

Two lectures, one recitation, and three laboratory periods are held weekly during the second semester.

#### PHYSIOLOGY

Dr. RYAN

Dr. SWINDLE

Instruction is based, as far as possible, on observations made in laboratory experiments and on demonstrations. The experiments are selected to impress the student with the methods of investigation, and the most important facts in the various divisions of the subject, to wit: muscle, nerve, electro-physiology, circulation, body fluids, respiration, secretion, digestion, absorption, metabolism, excretion, nutrition, internal secretion, central nervous system, and the senses. Physiologic processes not readily observed in the laboratory, the student learns with an insight derived from the practical grounding in experimentation.

In the laboratory, students work in groups of two or three, each group being provided with a desk completely equipped with apparatus, wired for electric power and chronometer current, and supplied with gas and compressed air. Experiments requiring a greater number of students for their manipulation are carried out in groups of eight or nine. Experiments requiring special apparatus are performed in small sections, the work being arranged for rotation of the sections. For such experiments rooms are provided adjacent to the main laboratory. The amount of time devoted to the laboratory work is approximately one hundred and eighty hours. Each student

is required to preserve a record of his experiments and observations, which is bound at the end of the course.

The facts observed in the laboratory experiments and demonstrations are discussed in lectures, quizzes, and theses. In the lectures which cover the subject systematically, free use is made of charts, models and projection lantern. In the thesis prepared by the student on selected subjects, reference is made to original papers to be found in the library.

Weekly oral quizzes are supplemented by written tests given upon completion of some general division of the subject.

Text books: Stewart's Manual of Physiology; Howell's Text Book of Physiology; Starling's Human Physiology.

Elective work: To be arranged. For students desiring special training in this subject.

Research: The facilities of the department are given to properly qualified applicants.

#### **EMBRYOLOGY**

#### · Dr. BATES

The course will cover the science so far as to fit the student with knowledge sufficient for his studies in obstetrics, and such other departments as may deal with embryonic conditions.

#### PATHOLOGY AND BACTERIOLOGY

Dr. TIMOTHY LEARY

Dr. Olga Leary Dr. McCarthy
Dr. Dunbar Dr. Guthrie
Dr. Dwyer Dr. Williams
-Miss Fritz Miss Pews

The instruction in Pathology consists of lectures, recitations, and demonstrations of fresh and museum specimens, supplemented by experiments and practical laboratory work in pathological histology.

Instruction in autopsy technic is carried out in the amphitheatre of the school and the amphitheatre of the Southern District Mortuary. The supply of fresh material, both surgical

and autopsy, is relatively large and it is usually possible to illustrate most of the common disease processes and many of the rare lesions.

Bacteriology is taught as a companion study to Pathology. As infectious processes are taken up, the bacterial causes are studied in connection with the pathology of the disease which they produce and demonstration is made of experimental lesions produced by the important pathogenic bacteria.

Immunology is taught by lectures, recitations, and practical laboratory work.

#### BIOLOGICAL CHEMISTRY

Dr. Overlander

Dr. Reis

Dr. THORPE

The course follows that given in the first year, and includes the same subjects as applied to the chemistry of pathological conditions.

Special attention is given to the chemistry and microscopy of urine, feces, blood and gastric contents. These subjects occupy a large part of the laboratory exercises.

Diagnosis of renal, gastric and intestinal diseases from chemical and microscopic findings is fully considered in lectures, recitations and conferences.

### PHARMACOLOGY

Dr. WHEATLEY

Dr. HASKINS Dr. BUCHOLZ Dr. COLWILL Dr. McCrudden Dr. Funnell Dr. Strong

This course consists of lectures, recitations, and laboratory exercises.

Special attention is given to the physiological action of drugs and to their therapeutical applications as indicated by clinical experience and by physiological and pathological conditions. The laboratory course is designed to familiarize the student with medicinal preparations. Prescription writing receives careful attention, and both the metric and apothecary systems are used. Recent additions in materia medica receive due consideration.

**Applied Therapeutics.** Fourth year students, in small sections, are given an opportunity to observe the results of the application of therapeutical agents.

**Toxicology.** The course in Toxicology is systematic and comprehensive. Students are required to determine the identity of various organic and inorganic poisons in stomach contents, tissues and in food.

In addition to the regular recitations, there are occasional conferences at which cases of poisoning are discussed.

#### MEDICINE

Dr. AMES

The Department of Medicine receives the students in the second year, after they have completed courses in Anatomy, Physiology and Histology.

Physical Diagnosis. This is an elementary course in the study of physical signs in health and disease, and is the foundation for the study of Clinical Medicine. The course consists of one lecture a week throughout the second year (thirty-two lectures), and fifteen exercises in sections, chiefly on elementary percussion and auscultation.

Dr. Seavey, Dr. E. Martin, Dr. H. Martin, Dr. Lynch

Theory and Practice of Medicine. The instruction consists of clinical lectures delivered to the entire class at the hospitals and in small sections at ward visits where diseased conditions are followed in their various stages.

Dr. Ames, Dr. Knowlton, Dr. T. J. O'BRIEN, Dr. PHIPPS, Dr. SPEAR, Dr. WATTS

Diseases of Children. This course is conducted by lectures given at the Medical School and at clinics given at the hospitals.

Dr. Emerson, Dr. Barron, Dr. Barker, Dr. MacGray, Dr. MacLennan, Dr. E. Martin, Dr. Place, Dr. Skirball, Dr. Sturnick

Medical Diagnosis. The students are shown the methods of clinical investigation, differential diagnosis and the gross pathological lesions.

Dr. Libby, Dr. Lynch

Hematology. A laboratory course in the examining of the blood, involving practical work with the microscope.

Dr. Hallisey, Dr. Berlin

Pulmonary Diseases. Pulmonary Diseases are considered as cognate parts of internal medicine and assigned their proper proportion of time for didactic and clinical instruction by the department.

Dr. Otis, Dr. Burnham, Dr. Finkelstein,

Dr. Houghton, Dr. Kent, Dr. Murphy, Dr. Riley, Dr. Wood

Neurology and Neuropathology. The instruction in these courses consists of lectures followed by clinical work at the Boston Dispensary and Psychopathic Hospital.

Lectures in Neuropathology are illustrated by slides and laboratory work and clinical collateral shown by cases in above mentioned hospitals.

Dr. Stearns, Dr. Myerson

Hygiene and Sanitation. Hygiene and Sanitation are conducted during the first half of the third year.

Mr. TURNER

Genito-Urinary Diseases. This course consists of lectures supplemented by clinical work at the Boston Dispensary and Boston City Hospital.

Dr. Whitney, Dr. Chute, Dr. Crosbie, Dr. Janes, Dr. Pearce, Dr. Wright

Clinical Medicine. Clinical Medicine is continued in the fourth year in a practical manner by the appointment of students as clinical assistants in the out-patient departments and in the wards of hospitals.

Dr. Ames, Dr. Libby, Dr. Austin, Dr. Phipps, Dr. Berlin, Dr. Dana, Dr. Felch, Dr. Levine, Dr. Macmillan, Dr. T. J. O'Brien, Dr. Preble, Dr. Stetson

Medical Jurisprudence. This course, which consists of a series of lectures, extends throughout the fourth year.

Dr. KELEHER

Rectal Diseases. This course is introduced by a series of lectures and is continued by clinical demonstrations at the Boston Dispensary.

Dr. F. P. WILLIAMS

Mental Diseases. The College has exceptional facilities for instruction in this subject. A course of lectures is given and clinical opportunities are available at several of the larger hospitals.

Dr. Lane, Dr. Fernald

#### SURGERY

Dr. LAHEY

Bandaging and Surgical Technique. The Department of Surgery first comes in contact with the students in the second year after they have had their descriptive Anatomy and Dissection, Physiology and Histology. In small sections at the several surgical out-patient departments, they are taught the principles of asepsis and antisepsis. At operations, they are taught something of the technique of minor surgery and receive practical instruction in the art of applying surgical dressings and in bandaging. Correlated with the second year of surgical instruction it is planned to give a course in Applied Anatomy.

Dr. Jantzen, Dr. Giddings, Dr. Hepburn

Surgery. In the third year instruction by didactic and clinical lectures begins. The former are given at the Medical School and the latter at the hospitals. The clinical work is conducted chiefly by class demonstrations upon surgical patients and mainly with a view to diagnosis and treatment. This work is supplemented by ward visits in small groups where the results of treatment are demonstrated and post-operative care is illustrated. Correlated with this clinical instruction there is a laboratory course in Surgical Pathology in which the pathological changes of the principal surgical lesions are demonstrated and the repair processes incident to the recovery from surgical affections are followed.

Dr. Lahey, Dr. Kimpton, Dr. Breslin, Dr. Cochrane, Dr. Coues, Dr. Dolan, Dr. Fraser, Dr. Hegarty, Dr. Tinkham, Dr. Walker

Clinical Surgery. In the fourth year, clinical lectures are continued. Fifteen lectures on special surgical subjects are given by men not connected with the Faculty but particularly qualified to speak on these subjects. Practical out-patient work

is required of each student for a month in minor surgery, in Genito-Urinary Surgery and in Orthopedics respectively.

Dr. Lahey, Dr. Kimpton, Dr. Meredith

Operative Surgery and Surgical Anatomy. The course in operative surgery upon the cadaver is essentially a course in surgical anatomy and in practical operative surgery.

Opportunity to witness major surgical operations in the large hospitals is open to the students on public operating days.

Dr. Kimpton, Dr. Coues, Dr. Giddings, Dr. Hepburn, Dr. Jantzen,

Orthopedic Surgery. The course in Orthopedic Surgery consists of didactic and clinical lectures extending throughout the year, and of clinics for small sections where the student is familiarized by actual work with the technique of the various mechanical and therapeutic measures employed in the practice of Orthopedic Surgery.

The clinical work will be carried on at the Massachusetts General Hospital and the Robert Brigham Hospital.

Dr. PAINTER, Dr. ROGERS, Dr. GODDU

#### GYNECOLOGY AND OBSTETRICS

The work of the two departments is administered as a unit.

Gynecology. During the third year, second semester, there are three exercises (two lectures and one quiz) each week in Gynecology.

Dr. Rushmore

**Obstetrics.** The instruction in Obstetrics consists of lectures, recitations, and clinical teaching. Each student is given the opportunity to serve as externe in the Obstetric Out-Patient department, where he personally delivers the six cases required for the degree. He is required to care for these cases during convalescence and to write a detailed report.

For the women students, arrangements have been made with the New England Hospital for Women and Children whereby each student attends her required number of confinements.

Operative Obstetrics. All the important obstetric operations and operative manœuvres are demonstrated to the class in small

sections, and each student performs these operations on models under the guidance of the instructor. This individual teaching constitutes a highly valuable and practical experience.

Dr. FRIEDMAN, Dr. PAINE, Dr. BRANT

Clinical Gynecology. Students in small sections, throughout the fourth year, are given instruction in the making of examinations, and in the methods of diagnosis and treatment. Clinics are held at the Dispensary for Women and at the Boston Dispensary.

Adequate provision is made for students to witness plastic operations and major pelvic surgery at the Carney Hospital.

Weekly class conferences are held during the second semester.

Dr. Kaan, Dr. Rushmore, Dr. Darling, Dr. W. I. Ryder, Dr. Grant, Dr. Twombly, Dr. Phaneuf

#### OPHTHALMOLOGY

Dr. GREENWOOD
Dr. EASTON
Dr. ELLIS

. Ellis Dr. G. H. Ryder

The course in ophthalmology is of a practical character being designed to give the general practitioner such knowledge of the subject as is most essential to his practice.

#### OTOLOGY

Dr. PLUMMER

Dr. Holmes

Dr. Drury

Instruction in otology consists of lectures on the anatomy, physiology, and pathology of the ear, and the student must prepare a dissection and model of the human ear. The lectures are illustrated by models, anatomical specimens, bone-corrosion preparations, and by microscopical sections of the organ of hearing.

#### LARYNGOLOGY

Dr. CHENERY .

Dr. Arkin Dr. Tilton

Or. TILTON Dr. VOGEL

Dr. Heffernan Dr. Tolman, Jr.

Third year students are given during the first semester a systematic course of lectures, illustrated by colored diagrams, models, pathological specimens and instruments.

Clinical laryngoscopy and rhinoscopy are required throughout the year. By practical examination the technic of instrumentation is taught as well as general diagnosis and treatment. The student is made familiar with ordinary diseases of the nose and throat and sees the more important operations.

#### DERMATOLOGY AND SYPHILIS

Dr. THORNDIKE

Instruction on these subjects is both didactic and clinical, and comprises a general survey of cutaneous medicine.

The exercises are held at the Boston City Hospital, where the clinical material is in great abundance.

The course is essentially practical. Special attention is given to the common dermatoses, such as the practising physician is called upon to treat, and stress is laid upon their differential diagnosis. The students come intimately in contact with the cases which are demonstrated at every exercise.

In the instruction on treatment, the newer procedures such as the application of carbon dioxide, the Kromayer light, radium, etc., are adequately demonstrated.

The teaching of syphilis is given in a systematic, detailed manner, supplemented with the exhibition of a large number of cases showing all grades of cutaneous, visceral, osseous, congenital and parasyphilitic lesions.

Included in the instruction on this malady, is the demonstration of the Wassermann reaction and the technic of intramuscular and intra-venous medication.

#### ROENTGENOLOGY

Dr. GEORGE

Dr. F. W. O'BRIEN

The School is well equipped with apparatus for making X-ray examinations. Lectures are given to the members of the fourth year class and students especially interested are given facilities of exceptional value at hospitals and private offices.

# DENTAL SCHOOL

WILLIAM RICE, D.M.D., Dean FRANK GEORGE WHEATLEY, A.M., M.D., Vice-Dean FRANK EUGENE HASKINS, Ph.G., M.D., Secretary

# Standing Committees

The Dean, Vice-Dean and the Secretary of the Dental School are members of all Committees, ex officiis.

ADMINISTRATION. — The President, Drs. Bates, Farris, Flynn, and H. H. Piper.

PROMOTIONS. — Drs. Farris, Farrington, Sullivan, and Bridge.

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TIMOTHY LEARY, AM., M.D 44 Burroughs St., Jamaica Plain Pathology, Bacteriology
WILLIAM RICE, D.M.D

Operative Dentistry

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  Anatomy W. Somerville
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  Pharmacology N. Abington

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- WALTER FREEMAN NOLEN, M.D. . . . . . . 535 Beacon St. Anatomy

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- WILLIAM PRESTON HOUSTON D.M.D. . . 416 Huntington Ave.

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- FRANCIS PATRICK McCARTHY, M.D. . . . . 394 Marlboro St. Pathology and Bacteriology
- ARTHUR LINWOOD MORSE, D.M.D. . . . . . 520 Beacon St.

  Orthodontia
- RICHARD HENRY NORTON, JR., D.M.D. . . . . 45 Bay State Rd.

  Anesthesia and Oral Surgery
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- CHARLES MARDEN PROCTOR, D.M.D. . . . . 419 Boylston St.

  Oral Surgery

  In charge of Dental Clinic (Boston Dispensary)

#### Lecturers

- CLAIRE ELSMERE TURNER, A.B., A.M. . . 7 Ware St., Cambridge Hygiene
- FREDERICK FINCH STRONG, M.D. . . . . 178 Huntington Ave. Electro-Therapeutics

#### Instructors

- HARRY JEROME BAKER, D.D.S. . . 471 Columbia Rd., Dorchester

  Amalgam Restorations
- JAMES ANTHONY BRADLEY, A.B. . . . . 35 Pearl St., Medford Chemistry
- HAROLD WALTER BROWN, D.M.D. . . . . 37 Chatham St., Lynn Operative Dentistry
- EDWARD VALENTINE BULGER, D.M.D. . . . 513 E. Broadway, Exodontia So. Boston
- HAROUTIOUN HOVANES CHAKMAKJIAN, A.B. 5 Blossom St.,

  Chemistry Arlington Heights
- ALFRED VALENTINE COGAN, D.M.D. . . 651 Broadway, S. Boston Crown and Bridge
- ALBERT WILLIAM COLWILL, Phm. D., Ph.C., M.D.

  Pharmacology 158 Huntington Ave.
- JAMES HARLOW DALY, D.M.D. 953 Massachusetts Ave., Cambridge Operative Dentistry
- JAMES J. DUDDY, D.M.D. . . . . . . . 15 Cottage St., Brockton Orthodontia
- FRANK HERBERT DUNBAR, M.D. . . 86 Rumford Ave., Mansfield
  Pathology and Bacteriology
- WILFRED GOLDWIN FUNNELL, M.D. . . . 156 Huntington Ave.

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  Prosthetic Dentistry

  Dorchester
- ROBERT EMMET GETCHEL, D.M.D. . . . 29 Palmer St., Waltham Operative Dentistry

- JOSEPH CORNELIUS GETHRO, D.M.D. . . . 848 Washington St.,

  Operative Dentistry

  Norwood
- ARTHUR LEWIS GREEELY, A.B. . . . 20 Westcott St., Dorchester Chemistry
- CHARLES ELLIOTT HATCH, D.M.D. . . . . 34 St. Stephen St. Operative Dentistry and Operative Technics
- WILLIAM HALL HOLDEN . . . . . . . 489 Warren St., Roxbury Roentgenology
- ALFRED LOTHROP HOOKER, D.M.D. . . . . . 38 Westland Ave.

  Prosthetic Dentistry
- WILLIAM HAYES HOYT, D.D.S. . . 28 College Ave., W. Somerville Exodontia
- GEORGE JOSEPH HUNT . . . . . . . . . . . . . 6 Beacon St.

  Metal Technic
- JOHN FRANCIS KEARNEY, D.M.D. . 726 East Third St., S. Boston Crown and Bridge
- FRANCIS JOSEPH KELEHER, A.M., M.D. . 24 Tremont St., Brighton Dental Jurisprudence
- JOHN VALENTINE KOHLHEPP, D.M.D. . 356 Massachusetts Ave. Operative Technics
- GEORGE KRAMER, D.M.D. . . . . . . . . 282 Bryant St., Malden Prosthetic Dentistry
- HOWARD MITCHELL MARJERISON, D.M.D. . . 149 Newbury St. Crown and Bridge
- FRANCIS O'MEARA, B.S., M.S. . . . . 34 Mapleton St., Brighton Chemistry
- EDWIN WILLIAM PETERSON, D.M.D. . . . 25 Huntington Ave.

  Prosthetic Dentistry
- ABIJAH DAVENPORT PIERCE, D.M.D. . . . . 34 St. Stephen St. Operative Dentistry and Assistant in Orthodontia
- VINCENT JOSEPHINE POLLINA, D.M.D. . . . . 261 Hanover St.

  Prosthetic Dentistry
- WILLIAM EDWARD REED, D.M.D. . . . 2107 Massachusetts Ave.,

  Prosthetic Dentistry Cambridge
- ALFRED GORDON RICHBURG, D.M.D. . . . . . . 739 Boylston St.

  Operative Dentistry
  - In charge of Dental Clinic (Mass. Home for Feeble-Minded)

- CATHERINE FRANCES RONAN, D.M.D. 114 Washington St., Salem
  Prosthetic Dentistry
- JOHN CHILTON SCAMMELL, A.B. . . . 91 Centre St., Dorchester English
- RUSSELL BRADFORD SPRAGUE, M.D. . 522 Commonwealth Ave. Histology
- FRANCIS HUNTINGTON SWETT, A.M. . 1010 Massachusetts Ave.,

  Comparative Anatomy

  Cambridge
- PERCY FORD SWINDLE, B.S., Ph.D. . . . . . . 23 Hemenway St, Physiology
- WILLIAM CHARLES TANNEBRING, D.M.D. . . . 163 Cabot St.

  Operative Dentistry

  Beverly
- WALTER JACOB VOLK, D.M.D. . . . . . . 763 Massachusetts Ave.,

  Prosthetic Dentistry Cambridge
- LEON BARTLETT WILLEY, D.M.D. . . . . 254 Huntington Ave.

  Operative Dentistry
  In charge of Dental Clinic (Forsyth Dental Infirmary)
- BRUCE McCLELLAN WOLFF, D.M.D. . . . 161 Allston St., Allston

  Prosthetic and Operative Dentistry

# Visiting Instructors

- FREDERICK CARROLL ALLEN, D.M.D. . . . 1330 Beacon Street,
  Orthodontia Brookline
- WALTER HENRY ARNOLD, D.M.D. . . . . . . 8 Beacon St. Operative Dentistry
- JOHN WINSLOW BAILEY, D.M.D. . . . . . . . 194 Boylston St. Operative Dentistry
- PETER HOGAN BARTON, D.M.D. . . . . . . 149 Newbury St.

  Operative Dentistry
- WALTER JOSEPH BILLINGS, D.M.D. . . . 24 Pennsylvania Ave.,

  Operative Dentistry Newton Upper Falls
- WALTER EMERSON BRIGGS, D.M.D. . . 35 So. Main St., Attleboro Crown and Bridge
- ALPHEUS ROBERTS BROWN, D.M.D. . . . . 201 Clarendon St. Operative Dentistry
- JAMES EDWARD DEVLIN. D.M.D., . . . 30 Surrey St., Brighton
  Operative Dentistry and Exodontia (Boston Dispensary)

- NEWTON ALLEN DEWITT, D.M.D. . . . 5 Boylston St., Cambridge Operative Dentistry
- GILMORE COLBY DICKEY, D.M.D. . Upham's Corner, Dorchester Operative Dentistry
- CLARK OTTO DOUBLEDAY, D.M.D. . . . . . 139 Newbury St. Operative Dentistry
- JOSEPH JAMES DOYLE, D.M.D. . . . 272 Bowdoin St., Dorchester Operative Dentistry and Exodontia (Boston Dispensary)
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- FREDERICK SAMUEL FOGG, D.M.D. . . . . 551 Boylston St. Operative Dentistry
- JOHN WOOD FORBES, D.M.D. . . . . . . . . 419 Boylston St. Operative Dentistry
- FRANK LUTHER GOODSPEED, D.M.D. . 23 Warren Ave., Whitman Crown and Bridge
- FREDERICK EDWARD GRANT, D.M.D. . . Boyden Sq., E. Dedham Exodontia
- WALTER HENRY GRANT, D.M.D. . . . . 107 Massachusetts Ave.

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- KNUT JOSEF LUTTROPP, D.M.D. . . . . . . . . 419 Boylston St.

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  Operative Dentistry
- ALEXANDER SMITH MacLEOD, D M.D. . 134 Westford St., Lowell
  Operative Dentistry

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ARTHUR LINCOLN MILES, D.M.D. . . 12 Magazine St., Cambridge

SHELLEY BARNES OSBORNE, D.M.D. . . 186 Commonwealth Ave.

Norwood

Operative Dentistry

Operative Dentistry

Operative Dentistry

JAMES RUFUS PIPER, D.M.D 179 Newbury St  Operative Dentistry
FRANCIS WHITE REGAN, D.M.D 2 Park Square Operative Dentistry
HEZE SUMNER RICHARDSON, D.M.D 462 Boylston St Operative Dentistry
HECTOR GEORGE RISEGARI-GAI, D.M.D 85 Pleasant St.  Operative Dentistry  Dorcheste
JACOB FREDERICK ROBERTS, D.M.D 9 Yale St., Medford Operative Dentistry and Exodontia (Boston Dispensivey)
MAX ROSENTHAL, D.M.D 2 Park Sq Operative Dentistry
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ROSS VROOM, D.M.D
GEORGE WILLIAM WHICHELOW, D.M.D 80 Boylston Son Operative Dentistry
BRUCE McCLELLAN WOLFF, D.M.D 161 Alston St., Alston Operative Dentistry
ANNE SKINNER WORTHEN, D.M.D 739 Boylston S Operative Dentistry
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HYMAN JOSEPH ADELSTEIN, D.M.D 242 Summer St., Lyn

FRANCIS JOSEPH GREELEY, D.M.D 177 Massachusetts Ave.,  *Pharmacology** Arlington**
REGINALD DIMOCK MARGESON, M.D 527 Beacon St.  Pathology and Bacteriology
MARION CECELIA STEVENS, D.M.D 37 Woburn St., Reading Prosthetic Dentistry. On war leave
DAVID LAWRENCE WILLIAMS, A.M., M.D 168 Huntington Ave.  Pathology and Bacteriology
Clerical and Laboratory Assistants
Anatomy
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JOSEPH POFCHER, '18
Operative Dentistry
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GLADYS I. STEVENS 38 Carver St., Cambridge
Crown and Bridge
ESTHER C. TATTAN
Pathology and Bacteriology
MANUEL DELEON
Physiology
ALWIN HENRY CRANTZ, B.S Brookline OHN HURTER GORDON, A.B Washington, D. C. MAY MILLER
Prosthetic Dentistry
ARAH E. MILLER 206 Massachusetts Ave.

# OUTLINE OF COURSE LEADING TO THE DEGREE OF DOCTOR OF DENTAL MEDICINE

# First Year

First Semester

Subject	PER SEMEST
Biology and Comparative Anatomy	96
Physics	32
Chemistry	192
English	48
Metal Technic	96
Prosthetic Technic	144
Second Semester	
Anatomy	300
English	48
Chemistry	192
Prosthetics	48
Metal Technic	96
Second Year	
First Semester	
Operative Technic	144
Dental Anatomy	
Prosthetics	144
General Histology	128
Dental Histology	
Physiology	192
Second Semester	
Oral Prophylaxis	100
Prosthetics	64
Applied Technic and Dental Anatomy	144
Pathology and Bacteriology	308
Third Year	
First Semester	
Prosthetics	144
Dental Pathology and Operative Dentistry, Lectures	16
Operative Dentistry, Infirmary	114
Crown and Bridge	72

Dental School	195
Hygiene	16
Radiography	15
Anesthesia	8
Laryngology and Syphilology	20
Orthodontia	16
Second Semester	
Prosthetics	144
Dental Pathology and Operative Dentistry, Lectures	16
Operative Dentistry, Infirmary	144
Crown and Bridge	72
Ceramics	15
Radiography	15
Materia Medica	128
Orthodontia	16
Fourth Year	
First Semester	
Operative Dentistry and Dental Pathology, Lectures	16
perative Dentistry, Infirmary	216
ral Surgery, Lectures	16
crown and Bridge	18
Prosthetics	144
rthodontia	80
Ceramics	30
Surgery, Clinic	50
Second Semester	
perative Dentistry, Infirmary	216
Surgery, Clinic	50
ral Surgery, Lectures	16
rown and Bridge	18
Prosthetics	144
rthodontia	80
eramics	30
thics and Jurisprudence	5
hysical Diagnosis	TE

# Departments of Instruction in the Dental School

#### OPERATIVE TECHNICS

Dr. HATCH

Dr. KOHLHEPP

Dr. H. W. BROWN

The student's work in this department will include the study of the forms of teeth, carving, and the study of the position and form of pulp chambers and canals by the dissection of teeth.

The course is supplemented by the study of the preparation of all classes of cavities and the use of the various materials in filling.

The Technic Laboratory is equipped with manikin heads, by means of which the student is enabled to obtain experience which closely simulates that of actual practice on the living patient.

### ANATOMY

Dr. Sullivan

Dr. Nolen

Dr. HEPBURN

The course in anatomy is given during the second half of the first year. It consists of lectures, recitations, and of special demonstrations on the cadaver. In addition, during the first four weeks of the course six hours a week are devoted to section work in Osteology.

# Statement of Expenses Incidental to Work in Anatomy

Dissecting material, \$7.50 Dissecting instruments, \$5 to \$8 Text-books, \$7 to \$15

Laboratory coat, \$1.25

Bone deposit, \$5.

# GENERAL CHEMISTRY

Mr. BRADLEY

Dr. ASHLEY Mr. CHAKMAKHAN Mr. O'MEARA

Mr. GREELEY

The course in General Chemistry is of the grade set by colleges and universities for the Bachelor's degree. It includes

the usual instruction on the metals and non-metals supplemented by qualitative analysis. It also includes a series of lectures on organic chemistry, and physiological chemistry. The time devoted to chemistry per week consists of three lectures with demonstrations, two recitations and seven hours of laboratory, making a total of twelve hours per week.

Dental Chemistry. The preliminary training in chemistry is followed by lectures, recitations, and laboratory work in dental chemistry. The metals, with their alloys and salts as used in dentistry, the bones and the teeth, the saliva, and the chemistry of the mouth are studied.

#### ENGLISH

#### Mr. SCAMMELL

The study of exposition and argument, as the basis of scientific and literary style; the elements of logic and critical analysis. Illustrative reading, discussion, themes, and reports. The object of the course is to develop mature judgment, intellectual appreciation, and a business-like mode of expression.

#### METAL TECHNIC

#### Mr. Hunt

This is a practical course designed to develop the mechanical ability of the student and to give him a knowledge of general mechanical principles necessary for the intelligent performance of his work.

The working qualities of the various metals are explained, and demonstrations given. The student is required to design, draw, and construct articles in metal, under the constant supervision of the instructor in charge.

# PROSTHETIC DENTISTRY

#### Dr. FARRIS

Dr. Farris
Dr. Adelstein
Dr. Gale
Dr. Pollina
Dr. Hooker
Dr. Kramer
Dr. Kramer
Dr. C. B. Morse
Dr. Volk

### Dr. Wolff

Particular attention is given to practical manipulation of vul-

canite, celluloid, aluminum, and cast metal, for dentures; to gold-plate work, to preparation of plate for continuous gum and the application of continuous gum to crown and bridge work, and the construction of gold crowns and bridges. The natural form, color, and arrangement of the teeth are explained, and the mode of procedure, from taking an impression to the completion of a case is thoroughly demonstrated. Instruction is given in anatomical articulation and in the treatment of cleft palate and other difficult cases.

#### PHYSIOLOGY

Dr. RYAN

Dr. SWINDLE

The course consists of lectures, laboratory work, demonstrations, and quizzes. In the laboratory and demonstrations the student learns the methods by which the facts of physiology have been ascertained. In the lectures the subject is treated systematically, the lectures being correlated with the laboratory work. Special emphasis is placed upon those aspects of human physiology which have a practical bearing upon the subject of dentistry.

#### HISTOLOGY

Dr. BATES .

Dr. SPRAGUE

The work during the first half of the allotted time will be identical with that of the students in the Medical School. This part of the subject covers the study of the elementary tissues, beginning with their origin in the embryo.

**Dental Histology.** Dental Histology will be taught during the second year. In this connection particular attention will be given to the study of the minute anatomy of the tooth. The development of the teeth will also receive careful consideration.

The department is equipped with microscopes which, on the payment of a small fee, will be at the service of such as cannot furnish instruments of their own.

#### OPERATIVE DENTISTRY

#### Dr. RICE

Dr. AINSWORTH	Dr. Houston	Dr. FARRINGTON
Dr. FLYNN	I	Dr. H. H. PIPER
Dr. Arnold	Dr. GETCHEL	Dr. PIERCE
Dr. BAILEY	Dr. GETHRO	Dr. J. R. PIPER
Dr. BAKER	Dr. W. H. GRANT	Dr. Regan
Dr. BARTON	Dr. HARDON	Dr. RICHARDSON
Dr. BILLINGS	Dr. HATCH	Dr. RICHBURG
Dr. A. R. Brown	Dr. Jepsen	Dr. Risegari-Gai
Dr. H. W. Brown	Dr. Kaston	Dr. Rosenthal
Dr. DALY	Dr. Knight	Dr. St. Andre
Dr. DEWITT	Dr. LUTTROPP	Dr. TANNEBRING
Dr. DICKEY	Dr. MacKinnon	Dr. TAYLOR
Dr. Doubleday	Dr. MacLeod	Dr. Vroom
Dr. FAXON	Dr. H. G. METTERS	Dr. WHICHELOW
Dr. Fogg	Dr. MILES	Dr. WILLEY
Dr. Forbes	Dr. Osborne	Dr. Wolff
	Dr. Worthen	

The course consists of a series of lectures supplemented by practical instruction in the Infirmaries of the School. The pathological conditions of the teeth and surrounding tissues are thoroughly discussed and methods of treatment given.

Preventive dentistry is carefully considered in its various phases and demonstrations are given in prophylactic treatment.

Ample opportunity for work in practical operative dentistry is furnished in this department, and the student by actual practice receives training in the various dental operations, and in the diagnosis and treatment of diseased conditions of the mouth and teeth.

Instruction is given in the use of local anesthetics and practical demonstrations in their application are made daily.

Frequent clinics illustrating the most approved methods of operating are given by the associate professor and members of the staff.

#### CROWN AND BRIDGE

Dr. BRIDGE

Dr. Cogan

Dr. MARGERISON Dr. October Dr. Goodspeed

Dr. Briggs

Dr. KEARNEY

The operating room and laboratory in this department are of ample size and are properly equipped with modern chairs and appliances for the construction of the most approved forms of crowns and bridges.

In this course, the student is prepared by a series of lectures and is then taken directly into the laboratory where he is required to make a variety of specimen cases on anatomically articulated models.

The specimen work is done during the Junior year, thus preparing the student for the practical work of the Senior year.

Special attention is given to the art of carving, shading and fusing porcelain, and the construction and adaptation of practical cases in this class of work is required. The department is open daily throughout the year, both morning and afternoon, and all work is done under the direct supervision of the professor in charge.

#### ORTHODONTIA

Dr. Duddy

Dr. DELABARRE Dr. A. L. MORSE Dr. ALLEN

Dr. PIERCE

The Junior year is devoted to lectures on the theory of normal occlusion and malocclusion, history, etiology, diagnosis, technic, and uses of appliances. The lectures of the Senior year cover the application of the principles of orthodontic procedure to the different classes of malocclusion. Emphasis is laid on preventive orthodontia rather than corrective.

Clinical work is elective, but those who do not conduct cases have to attend and observe the work, and submit written reports on assigned cases.

### PATHOLOGY AND BACTERIOLOGY

Dr. TIMOTHY LEARY

Dr. OLGA LEARY Dr. DUNBAR Dr. McCarthy
Dr. Williams

Dr. MARGESON

Miss Fritz

Miss Pews

Miss Pehrson

The subjects of pathology and bacteriology are considered together. This method permits showing the relation of bacteria to the disease processes which they produce. The work will consist of lectures, required laboratory work, and demonstrations. The student is made acquainted with the bacteria of the mouth, and is required to cultivate and study the important organisms. He is expected to carry out experiments to demonstrate the production of artificial caries. The subject of general pathology is thoroughly covered. The special pathology of the mouth, and of the respiratory and intestinal tracts, is given particular attention. Inflammations, especially the infectious types, among which are the lesions produced by the pyogenic bacteria, are carefully considered. The process of repair in soft tissue and bone, and tumors of the mouth and face, are studied from sections of lesions.

#### PHARMACOLOGY

Dr. WHEATLEY .
Dr. HASKINS

Dr. Bucholz Dr. Colwill Dr. FUNNELL

Dr. STRONG

Dr. GREELEY

Instruction in Pharmacology consists of lectures, recitations, and laboratory exercises. Special attention is given to the physiological action of drugs, and to the relation always existing between Therapeutics, Physiology and Pathology. The laboratory course is designed to familiarize the student with all medicinal preparations and processes.

Prescription writing receives careful attention and recent additions to *materia medica*, deemed of interest to the dentist, are duly considered.

# ORAL SURGERY, ANESTHESIA AND EXTRACTION

Dr. Chenery . Dr. Proctor

Dr. Norton Dr. Bulger Dr. Hoyt Dr. F. E. Grant

The course in Oral Surgery consists of a series of lectures. These lectures explain the fundamental facts which should be understood by all students who propose to treat any part of the human body.

Asepsis and anesthesia are discussed, and practically demonstrated in the infirmary. The student is instructed in the administration of ether and nitrous-oxide gas. Anesthetics, both general and local, are administered daily in the surgical clinic. Local anesthesia receives the careful attention that its importance demands. The technic of aseptic and antiseptic methods in dental work is thoroughly explained.

The clinics afford ample opportunity for practical experience in extracting and for demonstrating the surgical treatment of, the various lesions of the jaws and oral cavity.

# PHYSICAL DIAGNOSIS

Dr. HASKINS

This is an elementary course on the study of physical signs in health and diseases, and is necessary for the dental practitioner who is to administer general anaesthetics. The course consists of lectures and exercises in sections, chiefly on elementary oscultation.

#### ROENTGENOLOGY

Mr. HOLDEN

The course on Roentgenology consists of lectures to the Senior students on the electro-physics of the X-Ray, general technic and the interpretation of radiographs.

The School is equipped with apparatus of the most modern type.

# DEGREES AND HONORS

1916-1917

# Sixty-first Annual Commencement

June 18, 1917

#### DEGREES CONFERRED IN COURSE

#### Bachelor of Arts

Leon Eugene Ball (magna cum laude)
Howard Searles Bartlett
Leon Julius Carro
Loukas Nicholas Coussoule
Roland Crocker Davies

Roland Leonard Eaton

John Edgar Libby (extra ordinem as of the Class of 1912) Leander Allan MacDonald (extra ordinem as of the Class of 1914) Carl Alphonso Marsh (cum laude) Elbert Wilder Whippen (cum laude)

#### Bachelor of Science

Karl Bigelow Borden
Daniel Clarence Cameron
Philip Littlefield Coddington
Harold Edward Collins (cum laude)
Francis Gregory Curtin
Clarence Dunbar Hart
Franklin Johnson Lane
Oscar Earl Merrow (cum laude)
Frederick Henry Paul, Jr. (cum laude)

Howard Bennett Peck
Alfred Smith Reed
William Spunt
Charles Ingram Stanton (cum laude)
Walter Prescott Sweet
Leland Parker Symmes
Barron Crowell Watson

Ernest Clair Witham (extra ordinem as of the Class of 1904)

# Bachelor of Science in Chemistry

Albert Verner Bratt
Elmer Louis Claff
George William Collins
Harold Francis Hurley (magna cum laude)
Herman Wentworth Jones (magna

Albert John Moher (magna cum laude)
Joseph Ellsworth Poole
John Joseph Rourke
William Merrill Scamman
Archibald Kyle Sefton

Joseph Rozart Minevitch (extra ordinem as of the Class of 1916)

cum laude)

# Bachelor of Science in Civil Engineering

Louis Adelson Arthur Randolph Atkins Colby Lewis Burbank (cum laude) Bernard Dominic Connor Chester Thomas Caverly Davis Mizael Leme Ferreira John Michael McCarthy, Jr. Warren Franklin Merritt Ernest Dawson Mortenson

Harold Jenkin Williams

# Bachelor of Science in Structural Engineering

Calvin Marx Heileman

Frank Cooley Milliman

Leo Augustus Porter (cum laude)

Lake Smith Ransom (cum laude)

Edson Bancroft Stowell

Edward Andrus Terhune, Jr. (cum

laude)

# Bachelor of Science in Electrical Engineering

Horton Brown

Lewis Aaron Tentler

# Bachelor of Science in Mechanical Engineering

Chester Reed Earle

Viking Raymond Holmgren Mahlon Gilman Knowles

Benjamin Franklin Kraus

Byron Franklin Nichols Warren Franklin Terry

Frank Gustave Wahlen (summa

cum laude)

# Bachelor of Science in Chemical Engineering

Gilbert Edward Baldwin (magna

cum laude)

Elliot Chandler Foster Harold Bickford Leland

Philip Amory Carr

# Bachelor of Sacred Theology

Eleanor Bisbee

John Bancroft Bisbee

#### Master of Arts

Genevieve Henrietta Cheney Francis Joel Foster

Ruth Sibley Haskell Richard Roy Lamont

#### Master of Science

Kathryn Holden

Carl Weston Staples

#### Honors

Engineering)

Leon Eugene Ball (Political Science) Harold Francis Hurley (Chemistry)

Gilbert Edward Baldwin (Chemical Herman Wentworth Jones (Chemistry) Albert John Mohor (Chemistry)

Frank Gustave Wahlen (Mechanical Engineering)

#### Honorable Mention

Colby Lewis Burbank (Civil Engineering)

Harold Edward Collins (Political Science)

Carl Alfonso Marsh (History and Public Law)

Oscar Earl Merrow (Political Science) Frederick Henry Paul, Jr. (Biology)

Leo Augustus Porter (Structural Engineering)

Lake Smith Ransom (Structural Engineering)

Charles Ingram Stanton (Biology)

Edward Andrus Terhune, Ir. (Structural Engineering)

Frank Gustave Wahlen (Mathematics)

Elbert Wilder Whippen (English)

#### Doctor of Medicine

Edward Augustus Adams (cum laude) James Caleb Kirby

Richard Maurice Ash

Frederick Charles Atkinson (cum

Jacob Ellis Banquer (cum laude)

Raymond Gernand Bell

David Bridgwood

Abe Arthur Brown

Henry Seabury Brown

Alphonse Frank Budreski

Chester Arthur Casey (cum laude)

Lawrence Chesley Chisholm Anna Quincy Churchill, A.M. (summa Edward Lester Merritt

cum laude)

Millard Cressey Clark

Andrew John Crighton, Jr., A.B.

Manuel Felix Cunha (cum laude)

Inez Margaret Currie

Edward Anthony Duffy Patrick Joseph Fitzgibbons

Alma Evelyn Fowler

Leland Malcolm French (cum laude)

Henry Joseph Gallagher (cum laude)

Edward Henry Ganley

Louis Gordon

Louis Julian Grandison

Wilbourt Edward Greenwood (cum laude)

Leon Kevork Gurjian Miles Myer Hamburg

Morgan Patrick Hanlon

Abraham Haskins (cum laude)

Roy Joseph Heffernan (cum laude)

Jacob Hagop Hekimian

Morris Hoffman (cum laude)

Anne Leslie Hooper, A.B. (cum lande)

Lawrence Towle Hopkins Rhoda Letitia Howard

Lewis Wells Johnson (cum laude)

Royal Knight Joslin

Josephine Downie Kable (cum

Morris Frank Kaufman

Raymond Miles Krepps

Esdras Joseph Lanois

Charles Saul Lipsitt (cum laude) Walter Ralph Loewe (cum laude)

Rufus Wilfred Long

Alexander Stewart MacMillan (cum

Harry Leo McDonald

Hugh Gordon McKay (cum laude)

David Bernard Medalia James Morgan Meehan

Robert Elmer Merritt

James Moore Murphy (summa cum laude)

John Gabriel O'Connell (cum laude) Elizabeth Veronica O'Neill (cum

laude)

Warren Martin Pettingill

Arthur Andrew Rattey

Arthur Joseph Ring Edward Rosen (cum laude)

Benjamin William Rudman (cum laude)

Charles Augustus Salmon

Avery Hugo Sarno

Jacob Schæfer (cum laude)

Samuel Segal, Jr. Sigmund Simons

Robert Slater

Lillian Richardson Smith (summa

cum laude)

Sidney Solomon (cum laude)

Theodore LeRoy Story (cum laude)

Wesley Allter Van Deusen John Clement Ward

Helen Thompson Warner (cum laude)

Walter Brown Willey, Jr.

William Franklin Wood, M.D.

Thomas Clark Wyman

Seymour Israel Zonn (cum laude)

#### Doctor of Dental Medicine

Emory Chester Bardwell Robert Hyland Barnard Anthony Barone George Francis Bearse Harold Jones Bennett Bernard Berg Harlan Frederic Besse Helen Alva Marion Bixby Israel Michael Blumerfield Bernard Nathan Cantor Thurston Everard Carr Frank Leonard Chase Marion Julia Cobb Albert Gaffney Coffey William Thomas Coggar Harry Conrad Collier John Francis Commins Llewellyn Lloyd Crites Paisley Sommers Crowe Henry Raymond Delaney Ralph Jacob Deyoe John Gilbert Temple Dick Arthur Dixon, M.D. Theodore Patrick Donahoe William Frederick Donohoe Theresa Genevieve Doyle Arthur True Ellison Orrin Edgar Fernald Alice Sara Foster (cum laude) Merwin Keith Fox Eugene Louis Frechette Emile Raymond Fredette Albert Everard French Frank Fuller, Jr. Stanley Robert Garrard Samuel Goldman Edward Clark Goodell John Greenough Goodridge Ernest Moore Gould (cum laude) Richard James Grigg Philip Cheever Gutterson Stanley Edward Hall

Irving Robinson Hardy Clarence Wilfrid Harrigan Joseph Gerard Harrington Harry Asahel Hart Timothy Gerard Healey Sydenham Cohen Henriques Edward Augustine Henry John Patrick Herlihy Walter Irving Hird Martin Joseph Hoar Alfred Lothrop Hooker Harry Clinton Jones Anthony Lowis Kapochy John Francis Kearney Harold Francis Kedian John Edward Labonte Birney James Lameri Maurice Allen Litner Otis Moulton Littlefield Walter Eugene Lockwood Raymond Axel Lundgren John MacNeily Harry Mandelbaum Willard Everett Martin John Joseph McCann William Henry McCue Benjamin Mechaber William Anthony Milliken Anna Mintz William Edward Moore Carlton Brett Morse Myron Clarke Morse Raymond Francis Mulcahy Frank Hill Murphy John Ralph Murphy Phillip Irving Murray Thomas Edward O'Hara Richard Campbell Owen Arthur Todd Palmer Ray Huntress Palmer (cum laude) Clarence Elwood Parker (cum laude) David Porter

Alec Prizer Fred Goldsmith Rollins Edward Rosenburg Everett Hale Ruggles (cum laude) Edward Francis Ryan Edward Michael Ryan John Thomas Saunders Robert Nims Sawyer James Bernard Scanlan George Anthony Schlichte John Charles Seidel Michael Josesh Shea George Richard Smith Herman Nelson Smith Isidore Wilfred Smith

Stephen Lawrence Speight Bernard Francis Staples Louis Sternberg Donald Gordon Stewart Edward Francis Sullivan Alton Houghton Swett Clarence Milton Taft Wilfred Valentine Theriault Ralph James Thompson Oliver Dunbar Wescott Harold Snell Whitney Robert Patten Wildes Arthur Clark Wilson Hammon Louis Wollison

# Jackson College for Women

#### Bachelor of Arts

Almena Cogswell Helen Beatrice Higgins Helen Marion Jameson Nellie Birkenhead Mansfield Beulah Borden Moody Esther Parshley Dorothy Pease (magna cum laude)

Marion Ward Raymenton (magna cum laude Helen Almira Rowe (cum laude) Marian Everson Trott

Geneva Alice Wheet (summa cum laude)

#### Bachelor of Science

Margaret Cochran cum laude)

Marjorie Grace Dean Helen Beatrice Crocker (magna Mildred Brooks Simpson (magna cum laude)

#### Honors

Helen Beatrice Crocker (Political Mildred Brooks Simpson (Political Science) Science) Marion Ward Raymenton (History Geneva Alice Wheet (English) and Public Law)

#### Honorable Mention

Dorothy Pease (Philosophy and Geneva Alice Wheet (History and Education) Public Law

Helen Almira Rowe (History and Public Law)

#### Commencement Parts

James Moore Murphy, Cand. M.D.: "Animal Experimentation in Medical Progress."

Helen Almira Rowe, Cand. A.B.: "The American College Woman and Democracy."

\*Chester Reed Earle, Cand. B.S.: "The Contribution of the Engineering College to the Development of Character and Culture."

Charles Ingram Stanton, Cand. B.S.: "War-time Censorship as a Necessity."

William Edward Moore, Cand. D.M.D.: "A Decade in the History of Dentistry."

John Bancroft Bisbee, Cand. S.T.B.: "Religion and Government."

# Diplomas Given Subsequent to June, 1917

#### Doctor of Medicine

(Extra ordinem as of the Class of 1917)

Nathan Abraham Bolotow Michael Angelo Gangemi Franklin Chester Cassidy Fred Chambers Goddard

Lee Phillp Crimin Parker Mills

Louis Frederic Curran John Edward Ruisi Charles Stanislaus Doucet John Joseph Ward

# Doctor of Dental Medicine

(Extra ordinem as of the Class of)

1909

Clarence Ellsworth House

1912

Ernest Valentine Beazley

1915

William Tracy Wall

1916

Lauriston Ellis Orr

Bertram Hatch Sawyer

Walter Joseph Kennedy

1917

Laura Belle Deane Wendell Phillips Ford Charles Joseph Fox Fred Taylor Jewett Charles William Krasnoff Willis Abraham Rosenbloom Samuel Segal

Edwin Sleeper

Arthur Francis Williams

<sup>\*</sup> Called to National Service.

# Awards of Prizes 1916-1917

Scholarship of the Class of 1898 Albert Charles Waghorne

Scholarship of the Class of 1882 James Joseph Drummey

Wendell Phillips Memorial Scholarship

David Crockett

Greenwood Prize Scholarship in Oratory
Karl Raymond Henrich

Goddard Prizes

History: Daniel Lorden Coffey Physics; Woodman Walter Clough

Moses True Brown Scholarship Oswald Kenric Hammond

Alpha Omicron Pi Scholarship Genevieve Crosby

Alpha Xi Delta Scholarship Margaret Durkee

Chi Omega Scholarship Jane Stodder Davies

Rhetorical Prizes

First Prize
Jesse Moses Aronson

Second Prize
David Crockett

Third Prize
Irene Cushing



# Students Enrolled in Tufts College 1917-18

[In the following list the course pursued by each student is indicated by the Italic letters immediately following the name. The signs used are as follows: courses leading to the degree of A.B., ab; to the degree of B.S., bs—in Civil Engineering, ce; in Structural Engineering, ste; in Electrical Engineering, ee; in Mechanical Engineering, me; in Chemical Engineering, che. For the first two years in the Engineering School no differentiation is made.

The third column records the home address, which is in Massachusetts unless stated to be elsewhere. The fourth column gives the address at Tufts College, unless the street is printed in Italics, in which case it is a part of the home address.]

Fraternities: Z  $\Psi$  (Zeta Psi), 80 Professors Row;  $\Theta \Delta X$  (Theta Delta Chi), 123 Packard Ave.;  $\Delta \Upsilon$  (Delta Upsilon), 13 Sawyer Ave.;  $\Delta \Upsilon \Delta$  (Delta Tau Delta), 18 Latin Way; A T  $\Omega$  (Alpha Tau Omega), 134 Professors Row;  $\Sigma \Upsilon \Delta$  (Sigma Tau Alpha), 163 College Ave.;  $\Phi \Delta$  (Phi Delta), 20 Sunset Road;  $\Phi \to \Pi$  (Phi Epsilon Pi), 157 College Ave.; Commons Club, 890 Broadway.

# School of Liberal Arts

#### Senior Class

Ayers, Charles Frank	bs	Everett	101 Chestnut St.
Barbara, Charles Albert	bs		
		786 E.	4th St., S. Boston
Brown, William Thomas	bs	Bondsville	East, 28
Burns, Edward Gregory	ab	Taunton	ΣTA House
Bruyette, Harold Lawrence	bs	Collinsville, Con	$\rho$ $\Delta$ House
Coffey, Daniel Lorden	ab	Medford	38 Touro Ave.
Cooke, Arthur Burrell	bs	Waltham	ΔΥ House
Cronin, George Robert	bs	South Boston	Φ Δ House
Ellis, William	bs	Roxbury	14 Dewey St.
Geer, James Clifford	bs	Three Rivers	A T Ω House
Goldberg, Bernard Isadore	bs	Roxbury	39 ·Clifford St.
Gordon, Israel	bs	Boston	330 Harrison Ave.
Green, Bertram Emanuel	bs	Malden	Φ E Π House
Jochim, Henry Frank	bs	Revere	ΣTA House
Johnson, Winthrop Mann	bs	Natick	5 Concord St.
Lalor, Daniel Edward Coffey	bs	Watervliet, N.Y.	East, 18
Mendum, Willis Clark	ab	Woburn	16 Arlington Rd.
Messer, Theodore Powers	bs	Somerville	ΔT Δ House
Morison, Trueman Greene	bs	W. Somerville	Δ T House
Penaligan, James Henry	bs	Winchester	11 Maxwell Rd.
Porter, Russell Woods	ab	Springfield	ATΩ House

Rice, Leonard Alexander	ab	Somerville	51 Avon St.
Rood, George Wilson	ab	W. Somerville	62 Curtis St.
Warren, Lowell Alfred	bs	Waltham	30 Prospect St.
Weisberg, Max	bs	Boston	29 St. Botolph St.

# Junior Class

	-		
Barrows, Wendell Parsons	bs	Waltham	101 Alder St.
Beyer, Samuel Harry	bs	Roxbury	118 Howland St.
Campbell, Alan Bailey	ab	Dorchester	ΔΥ House
Colcord, Elmer Danforth	bs-bd	Pittsfield, Me.	Paige, 7
Crocker, Willard Frederick	bs	Quincy	ΔT Δ House
Crockett, David	ab	Arlington Heights	15 Wachusetl Ave.
Cronin, George Francis	bs	Malden 2	57 Highland Ave.
Davison, John Purley	ab	North Billerica	θ Δ X House
Farley, Albert Leo	bs	Boston	ΔT Δ House
Fernald, James Merrill	ah	Fitchburg	ΔΥ House
Garabedian, Harold Arsen	bs	Dorchester Center	ΣTA House
Hamlin, Roger Chesley	bs	W. Roxbury	148 Stratford St.
Henrich, Karl Raymond	ab	Greenfield	West, 17
Lebowich, Richard Jacob	bs	Dorchester	West, 26
Libman, Harry	bs	Dorchester	1 Page St.
MacLeod, Earle Harvey	bs	Cliftondale	ΔΥ House
Malone, James Francis	ab	Dorchester	ΣTA House
Marcus, Saul Maurice	bs	Lynn	ΦEΠ House
McKenna, Hugh Steele	bs	Hartford, Conn.	East, 18
McKenzie, William Forbes	bs	Thorndike	ATΩ House
Nash, Louis Edward	bs	Allston	ΔΥ House
Nathanson, Robert Bernard	bs	Boston	22 N. Russell St.
Quint, Samuel Theodore	bs	Malden	West, 8
Schenk, Harold Louis	ab	Wheeling, W. Va.	ΔT Δ House
Segel, Abram	bs	Melrose	ΦEΠ House
Stroehmann, Carl Frederick	bs	Wheeling, W. Va.	ΔT Δ House
Tyler, Maurice Leslie	bs	W. Medford	Dean, 13
Whitcomb, Lyman Wells	ab	Barre, Vermont	ZΨ House
Williams, Allton Thomas	ab	Revere	381 Broadway
Williams, Richard Joseph	bs	Lynn	Σ T A House

# Sophomore Class

_	- F		
Ballou, John Lyman	bs	Medford	76 Winthrop St.
Bedell, Howard Everett	ab	Wilmington	Burlington Ave.
Beaton, James Stanley	bs	Manchester	50 Central St.
Beattie, Ralph	ab	North Andover	A T Ω House
Brackett, William Ernest	ab	West Medford	ZΨ House
Cahoon, Sumner Roger	bs	Somerville	26 Warner St.

Cohen, Arthur Gilbert	ab	Somerville	129 Sycamore St.
Cosgrove, Charles David	bs	Medford	87 Otis St.
Goduti, Emil	bs	Somerville	83 Hudson St.
Goldfine, Albert	bs	Boston	ΦE II House
Hall Clifford Roberts	bs	Charlestown	54 High St.
Hall, Webster	bs	Somerville	23 Monroe St.
Hammond, Oswald Kenric	ab	Auburn, Me.	East, 30
Joy, Edward Albert	ab	Watertown .	297 Mt. Auburn St.
Kellock, James Bryden, Jr.	bs-bd	Somerville	22 Dover St.
Kenny, Walter Douglas	bs	Pittsfield	Φ Δ House
Lamont, Ralph Wilkinson	ab	Somerville	ZΨ House
Leach, Edgar Percy	bs	Methuen	East, 26
Lipkin, George	bs	Everett	817 Broadway
Miles, George Stanley	bs	W. Somerville	West, 27
Nickerson, Donald Edgar	ab	W. Somerville	West, 25
O'Donnell, John Parsons	ab	Medford	Dean, 7
Perham, Sidney Craige	bs	Chelmsford	ΔT Δ House
Prescott, Daniel Alfred	bs	Medford	16 Summer St.
Shepard, Sumner Ware	ab	Everett	16 Winthrop St.
Sherin, Marcus Leon	bs	Swampscott	East, 12
Sweeney, Frederick Lawrence	ab	E. Boston	35 Bennington St.
Thiesfeldt, Arnold Edward	bs	Gardner	θ Δ X House
Thissell, Paul Edwin	ab	E. Saugus	Sumner St.
Walker, Edgar Ruston	bs-bd	Cambridge	Paige, 25
Weston, Ralph Dewey	ab	W. Bridgewater	West, 10
Whitmarsh, George Freeman	bs	E. Braintree	West, 10
Wood, Ralph Peirce	bs	Everett	Φ Δ House

# Freshman Class

Anopolsky, David	hs	Roxbnry	244 Harold St.
Anderson, Paul Joseph Adolph	bs	So. Manchester, Con	nn. East, 29
Appel, Bernard	bs	Boston	9 Malden St.
Armstrong, James Harvey, Jr.	bs	Dorchester	12 Hamlet St.
Atkinson, Stewart Bryon	bs	Dorchester	44 Brent St.
Bieringer, Walter Henry	bs	Brighton	Dean, 8
Bishop, Leslie Swan	bs	Bridgeport, Conn.	East, 21
Blackford, Emerson Miller	bs	Findlay, Ohio	West, 28
Brenner, Harry	ab	Lynn	62 Church St.
Burstein, Samuel	bs	Roxbury	117 Crawford St.
Carmichael, Leonard	bs	Philadelphia, Pa.	Dean, 1
Carper, Harold Goodrich	bs	Somerville 228 Por	wder House Blvd.
Christiansen, George Uhlin	bs	Boston	34 Woodlawn St.
Claff, Philip Frederic	bs	Malden	West, 8

Clarke, Edmund Francis	bs	Somerville	44 Whitman St.	
Clark, Earl Vollintine	bs	Belmont	East, 31	
Cliff, Stanley Esten	bs	Somerville 29 Powder House Terrace		
Cohen, Edward Israel	ab	Roxbury	Φ E II House	
Cohen, Harold Israel	bs	Lynn	322 Summer St.	
Collieson, John Anderson	bs	Newton	69 Waban Hill Rd.	
Cosgrove, Frederick Augustus	ab	Medford	152 Fellsway West	
Covner, Albert Henry	bs	Lynn	99 Blossom St.	
Cushing, Lovell Mills	bs	Medford	37 Royal St.	
Daugherty, Howard Feer	bs	Indiana, Pa.		
		56 Boylston St., Cambridge		
Downs, Charles Henry	bs	Everett	16 K. K. Terrace	
Fava, Philip	ab	Newark	ΦEΠ House	
Feldman, Morris	bs	Boston	20 No. Anderson St.	
Frankel, William Israel	bs	Roxbury	West, 26	
Freedman, Jacob Jonathan	bs	South Boston	East, 12	
French, Carroll Brackett	bs	Lynn	143 Lynnfield St.	
Gager, Harold Anthony	bs	Willimantic, C		
Garson, Morton Simeon	bs	Malden	52 Myrtle St,	
Gilcreast, Seaver Richmond	ab	Methuen	East, 26	
Grant, Donald Clark	bs	Medford	57 Bowen Ave.	
Hall, George Dares	bs	W. Somerville	62 Bromfield Rd.	
Hayward, Charles Edward	bs	Attleboro	Dean, 11	
Heinz, Herschel	bs	Everett	166 Union St.	
Huntington, Gilbert Gerrish	bs	Boston	16 Westland St.	
Isaac, Edward John	bs	Brighton	32 Richardson St.	
Jones, Hobart Vassar	bs	N. Livermore, Me. 32 Hardy Ave., Watertown		
Jordan, Royal Robert	bs	Wilmington	Church St.	
Kaplan, Hilal	ab	Chelsea	74 Franklin Ave-	
Keefe, Owen Francis	bs	Watertown	14 Irving Park	
Kimball, Elbert Tower	ab	Burlington, Vt	, ,	
Levine, Samuel	bs	Boston	4 Genesee St.	
MacDonald, Ralph Reed	bs	Burlington	ZΨ House	
Mahoney, John Louis	ab	Quincy	188 Whitwell St.	
Matzkin, Jacob	Ъs	Chelsea	187 Chestnut St.	
Meisner, Max	bs	Newark, N. J.	West, 13	
Mullen, Charles King	bs	Wollaston	West, I	
Murphy, William Mansuetus	bs	Arlington Heights 35 Ashland St.		
Newton, Ernest Lincoln	ab	Somerville	126 Highland Rd.	
Noble, Milton Arthur	bs	W. Medford	70 Harvard Ave.	
Olson, Arvid Leonard	bs	Somerville	28 Gibbens St.	
Palmer, Howard Hunt	bs	W. Roxbury	192 Park St.	
Parnes, Hyman Abrabam	bs	Brighton	6 Lawrence St.	

Parsons, Edward Cole	bs	Dorchester East, 25
Peirce, Lincoln Carret	bs	W. Newbury
TO 1: C1 (70)	,	1039 Mass. Ave., Cambridge
Perkins, Sherman Thayer	ab	Lynn West, 24
Perry, Norman Warren	bs	Wilmington Church St.
Perry, William Hartwell	bs	W. Somerville West, 28
Pickett, George Arthur, Jr.	bs	Berlin, Conn. East, 10
Pierce, Chester Blanchard	bs	Campello 1081 Warren Ave.
Pierce, Nathan Gilson	bs	Chester, Vt. 15 Chester Road, Payson Park
Priesing, Carl William Hermon	bs	Roxbury 14 Albert St.
•	bs	N. Cambridge 138 Elm St.
Proctor, Ralph Warner Pryor, Paul Lawrence	ns	Revere \(\Sigma\) T A House
Quinn, David Harold	bs	Boston West, 12
Richards, Clare	bs	Stoughton East, 10
Rosenblatt, George D.	bs	Malden 93 Holyoke St.
Rower, Morris Levi	bs	Lynn 39 Wheeler St.
Russell, Gardner Wetherbee	bs	Concord Junction
Rutter, John Elliot	bs	Waltham East, 29
Ryan, James K.	bs	Ware 55 Liberty Ave.
Sampson, Arthur Graves	bs	N. Weymouth West, 2
Satz, Samuel Owen	bs	Newark. N. J. West, 13
Saunders, George Washington	bs	Arlington Heights 15 Lowell Pl.
Savitz, Harry Austryn	bs	Roxbury 35 Hollander St.
Smerage, Keith Percy	ab	Topsfield East, 34
Smith, Percy Thompson	bs	Ludlow, Vt. East, 5
Staples, Guy Baxter	bs	Lynn 61 Allen Ave.
Starkweather, Louis Pomeroy	bs	Plainfield, N. J. Dean, 3
Stone, Donald Pitman	bs	Marblehead Z \Psi House
Stowell, Elbridge Zebina	bs	Somerville 152 Powder House Blvd.
Sullivan, Kenneth Frank	bs	Houlton, Me.
		24 Milton St., Somerville
Taggart, Curtis Learoyd	bs	Wakefield East, 30
Taylor, Andrew Gavin	bs	Maynard East, 22
Telfer, Edgar Hall	bs	New York, N. Y. East, 31
Thompson, Albert	bs	E. Westmoreland, N. H. East, 5
Thompson, Cameron Saunders	ab	Syracuse, N. Y. East, 23
Titiev, Oscar	ab	Boston 135 Leverett St.
Trimble, Alfred King	bs	Cambridge 1137 Mass. Ave.
Tuttle, Horace Bancroft	bs	Waltham West, 11
Walton, George Alexander	bs	Calverl, Tex. 75 Winsor St., Boston
Welansky, James	bs	Roxbury West, 6
White, Edward Aldrich	bs	Newton Lower Falls Dean, 1
Winer, Hyman William	bs	Dorchester $\Phi \to \Pi$ House

Woodward, Clarence Harvey	ab	Tyngsboro	ATΩ House			
Wormwood, Gerry Kenneth	bs	Effingham Falls,	N. H. East, 15			
Yaffe, Louis Philip	ab	Boston	9 Auburn St.			
Young, Leo Alosh	bs	Dorchester	3 Annapolis St.			
Unclassified						
Baker, Max	bs	Dorchester 105	9a Blue Hill Ave.			
Burek, Joseph Bernard, Jr.	bs	Sunderland	East, 1			
Burns, Leo James	bs	Milford	297 Main St.			
Champlin, John, Jr.	bs	Westerly, R. I.				
CIN C DI	,		ton Ave., Boston			
Chilson, George Robert	bs		10 Fairmount St.			
Dee, William John	bs	South Boston	104 G St.			
De Lisle, Antonio Daniel	bs	9	149 Clarendon St.			
DuCharme, Joseph N.	bs	Millbury	t., W. Somerville			
Enander, Fred Conrad	bs	**	$n$ . A T $\Omega$ House			
Gennell, Charles	bs	Harrison, N. J.	ΦΕΠ House			
Gordon, Samuel Morris	bs	Boston	15 Billerica St.			
Hosmer, Merton Augustine Jewe	ett <i>bs</i>	Concord Junction	495 Main St			
Leavitt, George David	bs	Boston	99 Myrtle St.			
Lezberg, Joseph	bs	Boston	15 Revere St.			
Maiello, Pasquale Edward	Ъs	Providence, R. I.	Dean, 9			
Mantione, Rosario Leonard	bs	Pittston, Pa.	78 Myrtle St.			
Mitchell, Isadore	Ъs	Brockton	West, 3			
Moor, Erwin Charles	bs	E. Lynn	Commons Club			
Olim, Jacob Joseph	bs	South Boston	66 G St.			
Osgood, George Wesley, Jr.	bs	Lynn	West, 2			
Peterson, Clarence Earl Edwin	bs	Danielson, Conn.	Dean, 5			
Robillard, Emilien Oriese Rodrigue bs		Gardner	East, 34			
Roche, William James	ab	Roxbury	52 Langdon St.			
Shea, Oscar Albert	bs	Webster	West, 6			
Sullivan, John James	ab	E. Boston	23 Boardman St.			
Vadillo, Andrés	bs	Yucatan, Mexico	East, 11			

# Supplementary List

(Students present during the second semester of 1916–17, but not appearing in the catalogue.)

Cassidy, Robert Valden sp Webster 50 Princeton St., E. Boston
Lyen, Charles Lewis bs Boston 29 Audubon Rd.
MacDonald, Ralph Reed bs Burlington
Stern, Edward Alexander bs Fargo, N. D.

Tufts, Chester Warner bs New York, N. Y. Paige, I

Murphy, William Mansuetus bs Arlington Heights 35 Ashland St.

# Jackson College for Women

DORMITORIES: Metcalf Hall, 56 Professors Row; Alpha House, 18 Latin Way; Richardson House, 28 Professors Row; Gamma House, 37 Sawyer Ave.; Delta House, 114 Professors Row.

### Senior Class

Briggs, Katherine Emma ab W. Medford Richardson, 10 Chelsea Connolly, Margaret Agnes bs 220 Parkway Crosby, Genevieve abHingham Metcalf, 1 Danver, Anna Dorothea abGlenbrook, Conn. Alpha, 5 Davies, Jane Stodder abTufts College 72 Professors Row Deasy, Ella Marie abChelsea 98 Grove St. Durkee, Margaret Tufts College 38 Professors Row ah Richardson, I Glass, Ellen Melissa bs Lexington Lewis, Grace Melden ab W. Somerville Metcalf, 3 Morse, Laura Lucile Arlington 54 Brantwood Rd. ah Newcomb, Bertha May bs Portland, Me. Metcalf, 16 Nickerson, Muriel Nathalie ab Chelsea 139 Washington Ave. Perkins, Doris Burlington Richardson, 8 abWinter Hill Sargent, Elizabeth Tilton Alpha, 4 ah Semons, Gladys Milford ab Manchester Metcalf, B Ware, Kennetha Marguerite bs Tufts College 101 Capen St.

# Junior Class

Brooks, Ruth Elvira abW. Medford 40 Warren St. Bullard, Cecelia W. Somerville 21 Kidder Ave. abEverett 173 Broadway Cole, Ruth Jeanette ab Goldshine, Meriam Everett 161 Linden St. bs Delta Hardy, Helen Katherine ab Andover Dorchester 5 Carmen St. Hill, Marion Colvin abHinckley, Hilda Hyannis Alpha, 3 ab Hyland, Mildred Elizabeth ab Everett Metcalf, 3 Metcalf, A Ioel, Edith Marion ab Fitchburg West Somerville 44 Kidder Ave. Lewis, Laura Wright ab Little, Inga bs Laconia, N. H. Metcalf, 7 Chester St. Marland, Laura Northey ab Ballard Vale 62 Main St. McCoy, Dorothy Mary ab Somerville Neal, Martha Catharine ab Derry, N. H. Alpha, 1 Perkins, Madeline Abby bs Lynn Metcalf, 8 N. Grosvenor Dale, Conn. Metcalf, 2 Rich, Mary Lindsey ab Richardson, Ethel Wheeler ab Medford 41 Royal St.

ab

Worcester

Metcalf, 4

Somerville 133 Powder House Blvd.

Robinson, Ruth Madaline

Rockwell, Doris

Sherburne, Grace Noerr	ab	Melrose	Alpha, 6
Snow, Kathleyne Swift	аБ	Biddeford, Me.	Metcalf, 12
Tasker, Lorna Bernay	ab	Manchester, N. F.	H. Delta
Wiltshire, Bertha May	ab	Medford	112 Dudley St.
Soph	10 <b>m</b> 01	re Class	
Balzer, Anita Elizabeth	bs	Meriden Conn.	Gamma, 7
Bennett, Marion Ruby	bs	Westbury, N. Y.	Delta
Bernard, Madeline Elizabeth	ab	Medford	155 Jerome St.
Berry, Gertrude Wells	ab	Andover	Metcalf, 13
Brainard, Barbara Enola	ab	Somerville	82 Munroe St.
Brainard, Carolyn Lucie	ab	Somerville	82 Munroe St.
Caverno, Elizabeth Sherman	ab	Lowell .	Richardson, 6
Cunningham, Dorothea Patricia	ab	Medford	64 Magoun Ave.
Cushing, Irene	bs	Bethel, Vt.	Metcalf, 10
Davis, Marie Viola	ab	Winchester	59 Parkway
Grant, Mary Agnes	ab	Beverly	Delta
Haynes, Gertrude May	bs	Maynard	Metcalf, 2
Jerauld, Phyllis Eldredge	ab	Barnstable	Delta
Kelley, Elfreda Alice	ab	Marlboro, N. H.	
			St., W. Somerville
Lane, Rachel Perin	ab	Framingham	Metcalf, 9
Lynch, Margaret Esther	bs	Salem	Richardson, 4
Marston, Edna Gertrude	ab	Somerville	81 Liberty Ave.
Matheson, Orpha Barnard	ab	Provincetown	Metcalf, B
Partridge, Aphra Marion	ab	West Medford	105 Boston Ave.
Perkins, Lillian Muriel	ab	Medford Hillside	e 12 Emery St.
Phillips, Marion Louise	ab	Salem	Metcalf, 7
Pigott, Madeleine Grace	bs	N. Woburn	19 Ward St.
Prager, Hortense Lucille	bs	New York	Delta
Rankin, Virginia Davis	ab	South Easton	Metcalf, 11
Rathburn, Georgia Ruth	ab	Marlborough	Delta
Reed, Madeline Winifred	ab	Woodstock, Vt.	
			St, W. Somerville
Shaw, Dorothy	bs	Marblehead	Richardson, 4
Starks, Gertrude Ethel	bs	W. Medford	54 Jackson Rd.
Tucker, Dorothy Frances	ab	Randolph, Vt.	Delta
Walker, Adèle Elvira	ab		33 Sherbrooke Ave.
Wilde, Doris	ab	Fairhaven	Delta
Worth, Isabella Frances	bs	Nantucket	Gamma, 8

Freshman Class

bs Braintree

bs Medfield

Metcalf, C

Alpha, 1

Arnold, Edith Allen Atherton, Eleanor

Atwater, Inez Marion	bs	Somerville	98 Electric Ave.
Bagley, Ruth Procter	ab	Peabody	Alpha, 7
Beverly, Mary Munson	bs	Franklin	Metcalf, 11
Blood, Dorothy Kendall	bs	Fitchburg	Delta
Bolonsky, Rose	bs	Roxbury	Gamma, 5
Bremner, Elsie Macdonald	ab	W. Somerville	17 Russell Rd.
Briggs, Marion Louise	ab	W. Medford	150 Arlington St.
Campbell, Anna Margaret	ab	N. Weymouth	Gamma, 3
Cheever, Helen	ab	Manchester	Metcalf, 13
Chilson, Grace Louise	bs	Franklin	Metcalf, 10
Danver, Alice Dowd	ab	Glenbrook, Con	n. Alpha, 5
Gallagher, Dorothy	bs	Dorchester	115 Woodrow Ave.
Geiger, Eleanor Chalmers	bs	W. Somerville	57 Simpson Ave.
Gelfand, Sara Samuels	bs	Chelsea	Gamma, 5
Glawson, Mildred Burton	bs	Somerville	Gamma, 6
Hayward, Hattie Frances	ab	Hingham	Richardson, 5
Hérshman, Bertha Vivian	ab	Chelsea	129 Franklin Ave.
Hoar, Elizabeth Allen	ab	Barre, Vt.	Metcalf, 6
Hudgens, Helen Inez	ab	Ipswich	Gamma, 8
Jackson, Helen Clifton	ab	W. Somerville	130 Pearson Rd.
Kellock, Grace Rhoda	ab	Somerville	29 Teele Ave.
Kellock, Isabella Margaret	bs	W. Somerville	22 Dover St.
Knight, Irma Jeannette	bs	Somerville	175 Pearl St.
Knowlton, Miriam Clifford	ab	Lynn	Richardson, 2
Lyle, Sadie Marion	ab	W. Somerville	25 Lowden Ave.
MacDonald, Evelyn Frances	bs	Chelsea	49 William St.
MacIntosh, Catherine	bs	Winchendon	Richardson, 2
Maertins, Gertrude Ella	ab	Jamaica Plain	207 Chestnut Ave.
Margolis, Dora	bs	Chelsea	132 Franklin Ave.
Masseck, Carol Luella	bs	Arlington	22 Hopkins Rd.
McHugh, Mary Rose	bs	Somerville	9 Atherton St.
Miller, Margaret Stuart	ab	Bath, Me.	Gamma, 3
Moody, Jeannette Dunbar	bs	Cambridge	41 Roseland St.
Moon, Dorothy	bs	Chelsea	Richardson, 3
Naylor, Catherine	ab	Methuen	Metcalf, C
Oakman, Mertie Frances	bs	N. Marshfield	Gamma, 1
Peirce, Marion Appleton	ab	Arlington Heigh	hts II Appleton St.
Pierce, Marguerite	bs	Cambridge	37 Mt. Vernon St.
Piercy, Eva May	bs	Braintree	374 Washington St.
Prendergast, Annie Mary	ab	Concord Jct.	361 Main St.
Prescott, Helen Louise	ab	Braintree	Gamma, 1
Press, Leila Channon	ab	New York, N.	
Rogers, Helen Jacquelene	bs	Quincy	Metcalf, 6
0 ,			

Rowe, Herma Coffin	bs	Manchester, N. H.	Richardson, 5
Russell, Florence Miriam	ab	Concord Jct.	391 Main St.
Sculley, Mildred Josephine	bs	Hamilton	Hamilton Ave.
Simmons, Mildred	bs	Mountville, S. C.	Richardson, 3
Steere, Mildred Hazel	bs	Somerville	161 College Ave.
Steinberg, Minna	ab	Boston	29 Anderson St.
Stockwell, Madeline	bs	W. Somerville	9 Kidder Ave
Sullivan, Helen Mildred	bs	Gleasondale	Alpha, 7
Sundelöf, Karin Cecelia	ab	Roxbury	88 Moreland St.
Titlebaum, Ruth Miriam	bs	Dorchester	16 Fowler St.
Tuttle, Lula Belle	bs	Broad Brook, Conn	. Richardson, 9
Walker, Martha Doris	Бs	Newmarket, N. H.	Gamma, 4
Wardwell, Edna Julia	ab	Rockland	Alpha, 3
Wonson, Isabelle	bs	Fall River	Richardson, 1
Yerrinton, Margaret Johnston	ab	Arlington	59 Jason St.

### Unclassified

ab	Allston	182 Harvard Ave.
ab	Auburn, Me.	Metcalf, 15
ab	W. Somerville	130 Pearson Rd.
ab	Roxbury	20 Dorr St.
ab	Cambridge	Richardson, 11
bs	Medford Hillside	: 123 Winthrop St.
ab	Manchester, N.	H. Delta
	ab ab ab ab bs	ab Allston ab Auburn, Me. ab W. Somerville ab Roxbury ab Cambridge bs Medford Hillside ab Manchester, N.

### Special

Chamberlain, Dorothy Dean	Boston	Richardson House
Dyer, Marion Randall	Cape Elizabeth,	Me. Metcalf, 14

### Supplementary List

(Students present during the second semester of 1916-17, but not appearing in the Catalogue.)

Lyle, Sadie Marion ab W. Somerville 25 Lowden Ave.

## Engineering School

## Senior Class

Aronson, Jesse Moses	st e	Boston	80 Revere St.	
Briggs, Albert Jeffries	me	Watertown	ΔΥ House	
Bronski, Leo Max	st e	Dorchester	ΦEΠ House	
Clark, William Wells	се	Waltham	Commons Club	
Cobb, Forrest Willard	ch e	Waltham	ΔT Δ House	
Drummey, James Joseph	ch e	Revere	ΣTA House	
Highriter, Harry Walter	ch e	Meriden, Conn.	ZΨ House	
Hodgdon, Melvin Wyman	me	Somerville	8 Indiana Ave.	
London, Harry	ch e	Dorchester	ΦEΠ House	
Loring, Warren Edward	st e	Charlestown	9 Cedar St.	
Maker, Charles Gilbert	се	Fall River	ΦΕΠ House	
Nichols, Alfred Richard	me	Dorchester	ΔΥ House	
Norton, Edward Howd	ch e	N. Westchester, C	onn. $\Delta \Upsilon$ House	
O'Marra, Frank Joseph	me	Kingston, N.Y.	θ Δ X House	
Ratti, Augustus Peter	st e	W. Everett	179 Bucknam St.	
Rice, Harold De Blois	ch e	Somerville	Σ T A House	
Russell, Herbert Burgoyne	st e	Jamaica Plain	ATΩ House	
Segal, David	ch e	Roxbury	ΦEΠ House	
Smith, Christopher Ilsley	ee	Chatham	ΣTA House	
Waghorne, Albert Charles	се	Melrose	Commons Club	
Wainwright, Stuart Frederick	ee	Andover	Paige, 29	
Waldo, Hollis Thurlow	me	Groveland	Commons Club	
Walker, William Edward	ch e	Orange	A T Ω House	
Woodill, Harold William	ce	Melrose	Commons Club	
Zulalian, Badrig Barsam	ce	Boston	16 Waltham St.	
Junior Class				

Zulalian, Badrig Barsam	ce	Boston	16 Waltham St.
	Junior	Class	
Abbott, Robinson	ce	Malden	Commons Club
Bloom, Walfred George	ce	Lynn	13 Carleton St.
Clough, Woodman Walter	ch e	Stoneham	66 Wright St.
Cogswell, Burnham	ее	Essex	East, 16
Davis, Daniel Louis	me	Kendal Gree	$\Phi \Delta$ House
de Faria, Joas Jorge	ce	Brazil 28 1	Dearborn Rd., Medford
DeFoe, Joseph Harry	st e	Chelsea	105 Library St.
Demirjian, Nash Manook	ch e	Newton Cen	tre e Ave., W. Somerville
Entwistle, Guy Russell	ее	Brighton	ΣT A House
Falk, Arthur Herman	me	Dorchester	307 Harvard St.
Finnell, Norman Croft	ch e	Cambridge	66 Wendell St.
Ford, Horace Hills	ch e	W. Somervill	le 22 Powder House Blvd.

Gallagher, Frank Joseph	st e	Somerville	81 Benton Rd.
Green, Richard Winthrop		Winthrop	East, 28
Harris, Richard Treat	st e	Norwalk, Conn.	ΔΥ House
Hayward, Ernest Lincoln	st e	Arlington	Δ Υ House
Hudson, Abel Clifford	st e	Auburn, N. Y.	A T Ω House
Hunnewell, Roger	се	Somerville	θ Δ X House
Kagan, Maurice	ce	Boston	77A Revere St.
Kimball, Harold Francis	ee	Arlington	Commons Club
Lincoln, Frank William, Jr.	me	Somerville	45 Oliver St.
Merrill, Carl Bixby	ee	Medford	92 Otis St.
Moodie, William Carmichael	me	Southbridge	Δ Υ House
Parnell, Eric	ee	Medford	Commons Club
Pennucci, Alexander	ch e	East Boston	Commons Club
Philpott, Herbert Charles	ce	Arlington	Commons Club
Piper, Arthur Maine	ch e	Medford Hillside	312 Boston Ave.
Reynolds, Kenneth Cass	st e	W. Somerville	231 Morrison Ave.
Rich, Richard Augustus, Jr.	ee	Truro	Φ Δ House
Ropes, Lawrence Goodhue	st e	Salem	Z Ψ House
Rosenauer, Moses Bernard	ee	Somerville	ΦEΠ House
Rosenthal, Edward	st e	Chelsea	119 Franklin Ave.
Shepherd, Harold Nichols	ch e	Lynn	Commons Club
Walsh, James Henry	st e	Somervillé	122 Prospect St.
White, Wallace Tirrell	me	N. Attleboro	ATΩ House

## Sophomore Class

Adams, Walter Leslie, Jr.
Andersen, George
Ashton, Henry Clark
Baker, David Joseph
Barrow, William Beasor, Jr
Benson, Henry Wilhelm
Beyer, Israel
Bickford, Jason Frederick
Brothers, George William
Casey, Edward
Chernaik, Myer Joseph
Clarke, John Haggett
Cole, Russell Eliot
Conn, Franklin Earle
Cook, William Alfred
Crosby, Edwin Winslow
Delaney, James Frank
Delano, Edward Clyde

Milford Z Ψ House Medford 128 Sheridan Ave. 33 Columbus Ave. Somerville Boston 145 Chambers St. Birmingham, Ala. ATΩ House West Somerville 6 Boston Ave. Roxbury 118 Howland St. Somerville A T Ω House Hudson West, 11 Tufts College 28 Dearborn Rd. 159 Chelsea St. East Boston 35 Montrose St. Somerville Somerville 22 Edmands St. Auburndale A T Ω House Littleton West, 15 West Medford ΔΥ House Dorchester 19 Hewins St. Fall River East, 33

Dewey, Edson Eugene Doucet, William Henry Dunham, John Wetherbee

Finnegan, George Henry Gifford, Frederic Anthony Gillmore, Reginald Waldo Ginsberg, Joseph Charles Gladu, Francis Raymond Hartwell, Warren Emerson Hastings, Raymond George Horenstein, Alexander Johnson, Arthur Harmon Kelley, Thomas Urban Knight, Hugh Chatfield MacAffee, John Macdonald, Donald Lewis Marshall, Donald Leslie Marshall, Irving Davis McGee, Harry Shirl McNamara, Edmund Joseph Mitsch, John Donald Morgan, Carl Leon Pearlmutter, Hyman Perry, Emmanuel von Betzen Peterson, George Harry Pollard, James Joseph, Jr., Porter, Harold Hill Pride, Alfred Melville Rafferty, John Herbert Joseph Ratta, James Albert, Jr., Riley, Albert Joseph Germond Roberts, Edward Bird

Rockwell, Walter Francis Sabine, Edward Dana, Jr., Shoolman, David Leveton Simanofsky, Louis Tibbetts, Frank Alliston Walsh, Joseph Patrick Waugh, Harry Edgar Wilson, Edmund Geddes Wilson, Harold Olin Wolk, Louis

Brookline 8 Cypress Place Wakefield 37 Bennett St. W. Somerville 120 Powder House Blad. Stoneham II Dean St. Woburn 25 Lawrence St. N. Weymouth 46 Squanto Rd. East Boston 33 Decatur St. Cochituate Stanton St. Littleton Weston Tientsin, China ΦΕΠ House Holden Δ Y House Revere West, I Melrose Highlands 132 Melrose St. Woodstock, N. B. Δ T House W. Somerville 72 Bristol Rd. W. Somerville II Bay State Ave. Everett A T Ω House McKeesport, Pa. East, 16 Clinton West, 1 Mattapan 10 Hazleton St. Wolfeboro N. H. Φ Δ House . Allston 4 Everett Sq. Boston Φ Δ House Woburn 50 Lake Ave. W. Somerville 1091 Broadway Salem A T Ω House Somerville 150 Hudson St. Cambridge 341 Columbia St. W. Medford 13 Holton St. 61 Bellingham St. Chelsea Hyde Park 53 Chandler St., W. Somerville Dorchester ΣTA House θ Δ X House Yonkers, N. Y. West, 8 Malden Roxbury 44 Stanwood St. 223 Morrison Ave. W. Somerville Somerville 122 Prospect St. Somerville I Lexington Ave. Σ T A House Dorchester New York, N. Y. θ Δ X House 37 Magnolia St. Malden

#### Freshman Class

Baker, Samuel	W. Somerville	33 Bay State Ave.
Beck, George Paul	Everett	91 Morris St.
Blake, John Twiss	Roslindale	102 Hewlett St.
Booth, Thomas Eugene	E. Boston	160 Leyden St.
Brady, Albert Francis	Somerville	83 Mt. Vernon St.
Bradley, Robert Ivan	N. Weymouth	West, 3
Burke, George Murray	Cochituate	22 E. Pond St.
Burnside, Howard Leroy	Everett	ΣTA House
Callahan, Daniel Edward	Lynn	West, 25
Chandler, Frank Otho	Lynn	164 Maple St.
Cohen, James	Roxbury	25 Hutchings St.
Colucci, Steven	N. Woburn	East, 23
Cox, Joseph Francis	Somerville	100 Albion St.
Crowell, Henry Plummer	Manchester, N. F.	H. East, 1
Damon, Alfred Clayton	Cochituate	6 Stanton St.
Devine, Paul Francis	South Boston	787 Broadway
Doherty, John Leo	Woburn	32 Wright St.
Donovan, William Joseph	Somerville	49 Belmont St.
Esten, Eugene Whitcomb	Littleton	West, 14
Favreau, Felix Arthur	Brighton	67 Dunboy St.
Fitch, Roger Seabury	Bridgewater	Dean, 11
Gitter, Jacob	Chelsea '	20 Walnut St.
Gorrie, Edward James	Dorchester	I Stockton St.
Governan, Israel Louis	Cambridge	525 Windsor St.
Graham, Francis Joseph	Boston	21 Bowdoin St
Grant, Melville Fuller	W. Medford	II Brooks St.
Hamill, Curtis Francis	Stoneham	18 Park St.
Hardy, John	Littleton	West, 14
Haskins, Lawrence Emerson	Somerville	6 Tennyson St.
Hayes, Elmer Russell	Somerville	18 Benedict St.
Herald, Charles Raymond	Everett	ATΩ House
Higgins, Theodore Rundlett	Wollaston	208 Highland Ave.
Hill, John Bliss	Brooklyn, N. Y.	East, 25
Kreagloh, Frank Holm	Cambridge	401 Broadway
Le Fevre, George Howard	Norwood	East, 24
Linde, Clarence Siverin	So. Manchester,	Conn. East, 33
Matthes, George F.	Jamaica Plain	20 Lee St.
McDonnell, Joseph James	Roxbury	9 St. James St.
Mitsui, Takahisahira	New York, N. Y	Paige, 32
Mitsui, Takamichi		
Moore, Robert Thomas	Waltham	1 Harvard St.
Morse, Arthur Lewis	Watertown	Commons Club

Mortimer, Alfred Charles, Jr.
Ober, Joseph Albert
Palmer, Charles Mulford
Pearson, Harrie Wheeler
Pease, Brooks
Peterson, Russell Robert
Pillsbury, Roland Dixon
Pratt, Malcolm Field
Purinton, Norman Wilson
Reynolds, Chester Abel
Rockwell, Donald Edward

Sawyer, Leonard Albert

Silverstein, Maurice Louis Small, Willard Stanton, Jr. Smith, Wendell Phillips Snow, David Francis Spear, Henry Thompson Storrs, George Tyler Taylor, Harry Taylor, Harold Wood Taylor, Theodore Mitchell Thompson, John Earle Tilton, Warner Belknap Towle, Albion Joseph Twombly, Francis Horatio Tyler, Kenneth Ellsworth Wallace, Howard Arthur Wallace, Merrill Gregory Wiegand, Joseph Nicholas Wright, Wells Dungan

Winthrop East, 6 W. Medford 43 Monument St. Boston 29 Norway St. Allston East, 15 W. Somerville 205 College Ave. Cliftondale East, 8 W. Somerville o Curtis St. Somerville 13 Evergreen Ave. Everett ΔT Δ House W. Somerville 231 Morrison Ave. W. Somerville 133 Powder House Boulevard Hartford, Conn. 74 Brookings St., Medford Malden 280 Cross St. Washington, D. C. East, 8 Stoneham 28 High St. Arlington 15 Lincoln St. Nashua, N. H. West, I W. Somerville 55 Liberty Ave. Brighton 59 Fairbanks St. Dorchester East, 24 Arlington Heights 178 Oakland Ave. Reading 3 Grand St. Raymond, N. H. ΔT Δ House Freedom, N. H. West, 7 Framingham Dean, 13 31 School St. Manchester Woburn 112 Garfield Ave. W. Somerville ΣTA House Armington, Mont. East, 20 Andover Y. M. C. A., Somerville

#### Unclassified

Bradt, Dyer Crowell Heyman, Morris Kresser, Ernest Lawrence Lewis, Samuel Clinton Najarian, Matthew Oghasat Sliski, John Wang, Chih Ya Yang, Ching-Hsun Rome, N. Y. East, 9
New York, N. Y. ФЕП House
Roxbury 49 Parker Hill Ave.
Meriden, Conn. East, 15
Nashua 36 Melendy Ave.
Boston 78 Myrtle St.
Peking, China West, 18
Changsha, China West, 22

## Supplementary List

(Students present during the second semester of 1916-17, but not appearing in the catalogue.)

Brandt, John T. MacAffee, John Wooster, O. 19 Day St., Somerville Woodstock, N. B. East, 21

### Bromfield-Pearson School

Bergstrom, Carl Freetiof	E. Lynn	150 Jenness St.
Costa, Mario Pereiva da	Brookline	93 Marion St.
Cohen, Ephraim	London, England	d Dean, 9
Cox, William	Revere	East, 4
Garside, George Herbert	Meriden, Conn.	East, 19
Haines, Joseph Edward	Jamaica Plain	4 Dalrymple St.
Huss, Edward Harry	Newark, N. J.	East, 3
Kimball, Arthur Reginald	Hingham	Dean, 2
Kirshtein, Samuel	Revere	East, 4
Leary, Arthur Vincent	Medford	7 Pleasant St.
Lee, Walter Henry	Dorchester	ΦEΠ House
Lindell, Nils Gustaf	Medford .	42 Alexander Ave.
MacKay, Milton A.	Cliftondale	4 Danforth Ave.
McCafferty, Joseph Edward	Jamaica Plain	28 Holbrook St.
Moffie, Saul Elias	Roxbury	53 Humboldt Ave.
Myers, Benjamin	Chelsea	26 Grove St.
Shuman, Alton Brooks	Malden	15 Revere St.
Simpson, John Fred, Jr.	The Weirs, N. H	East, 6
Tobey, Philip Calvin	Roxbury	17 Humboldt Ave.
Turner, Harold Melvin	Norwell	East, 9

## Crane Theological School

#### SIX-YEAR COURSE

#### Fifth Year

Paige, 7

Colcord, Elmer Danforth bs-bd Pittsfield, Me.

Fourth Year

Cole, Alfred Storer bd Buckfield, Me. Paige, 27 Smith, Isaac bd Gardner 32 Osgood St.

Second Year

Kellock, James Bryden bs-bd Somerville 22 Dover St.
Walker, Edgar Ruston bs-bd Cambridge Paige, 25

First Year

Newton, Ernest Lincoln ab-bd Medford 67 Newbern Ave.

Special

Carr, Allan La Motte

Manchester, N. H.
Paige, 19
Cuomo, Taskko

Utica, N. Y.
Paige, 12

Dehly, Gerhard

W. Medford

Franc, Samuel Edward

Hubon, Charles Wilson

Manchester, N. H.
Paige, 19

Ctica, N. Y.
Paige, 12

Medford

233 Arlington St.
Chicago, Ill.
Paige, 31

Paige, 31

#### Unclassified

Drummond, Chester Arthur Somerville 29 Central St.
Earll, Irene, (A.B.) Medford Hillside 14 Fairmount St.
Taylor, Henry Butterfield W. Somerville 123 College Ave.

#### Graduate School

#### Resident

- DURKEE, HENRIETTA NOBLE 38 Professors Row A.M., 1895 Flrst Year History
- EDMANDS, LILLIAN RICE W. Somerville 10 Jay St.

  A.B. (Mt. Holyoke) First Year Biology
- HAYWARD, ELEANOR Boston 32 Peterboro St.

  B..S, 1915 (Simmons) Second Year Political Science
- HORNE, ELIZABETH AMY

  Beverly

  46 Abbott St.

  A.B. 1904 (Boston University) First Year French and Education
- MACKNIGHT, ANNETTE BASSFORD New York City Gamma, 2

  A.B., 1914 First Year English
- WHITING, MAISIE BLANCHE

  Lynn

  English High School

  A.B. 1904 (Boston University)

  First Year French and Education

#### Non-Resident

- FIELD, ABBY RUGG W. Somerville 152 Curtis St.

  A.B., 1913 First Year Latin and Greek
- Lybeck, Robert Ferdinand W. Medford Mystic Valley Parkway B.S., 1915 Second Year Chemistry

# Two-Year Pre-Medical Course

[P. O. Address, 28 Mechanics Street, Boston, Mass.]

Adelson, Samuel Newport, R. I.
Alberts, Milton Benjamin Dorchester
Altman, Joseph Harry
Apple, Bernard
Atkins, Samuel Maurice
Baker, Norman Asa Revere
Balboni, Alexander Edward Cambridge
Barron, Louis Jacob
Batal, John Thomas Lawrence
Bellano, George
Bennett, Max
Bennett, Warren Leroy, A.B. (Bates College) . North Bridgton, M.
Bergeron, Charles Arthur Fall River
Berlin, David Daniel Dorchester
Billard, Emmanuel William Newport, R. I.
Bloomberg, John Rubin Boston
Bolster, John Aloysious
Braunstein, Sigmund Newark, N. J.
Brennan, Jeremiah Francis
Brennan, Earle Henry
Briggs, Harry Goddard North Attleboro
Bunnell, Stuart Dyer Revere
Burtnett, Arthur Grant West Somerville
Caswell, Harold Augustus
Cohen, Abraham Irving
Cohen, Louis Morris New Bedford
Cohen, Theodore Boston
Cohen, William Benjamin
Consales, Peter Augustine Boston
Consentino, Albert Lawrence
Cook, George Francis Norwich, Conn.
Curley, John Joseph
Curtin, John Francis Lawrence
Cutler, Benjamin
Daley, Joseph Arthur South Natick
D'Angelo Andrew Richard Frierett

D to De th
Davis, David
Decker, Percy William
DeGroot, Max
Dewire, William Francis
Downey, Edward Thomas
Downey, Thomas, Jr Jamaica Plain
Driscoll, John Joseph South Boston
Drukman, Samuel
Duggan, George Joyce Lynn
Durney, Paul Seymour
Edlin, Jacob Vernon New Bedford
Ekwall, Thorsten Roland
Estabrook, Milton Arlington Heights
Faunce, Madeline Maria
Feinberg, Banice
Feinstein, Louis
Fish, Samuel Dorchester
Fisher, Jacob, Jr Boston
Fladger, Louis
Fletcher, Helen Augusta South Boston
Flynn, William Anthony Cambridge
Fong, Theodore Chen
Foster, Kendall Wilson Boston
Fox, Samuel
Fuxon, Samuel Portland, Me.
Gelerman, Joseph Max
Goldfarb, Daniel Charles
Gorton, Samual Potter Norwich, Conn.
Graves, John Oliver West Newton
Gray, Edward John Dorchester
Green, David Samuel Dorchester
Green, Isadore
Gregory, George Richard Pittsfield
Hanes, Harold Stuart Melrose Highlands
Harris, Maurice Coleman Lawrence
Holden, William Hall Lynn
Holmberg, Clarence Great Falls, Montana
Honold, William George W. Somerville
Isherwood, Ainsworth Varnum Lowell
Jacobs, Harris Reuben East Boston
Johnson, Carl John Wethersfield, Conn.
Jones, James Jesse
34 /

Jordan, Mrs. Sara Murray Newton A.B. (Radcliffe), Ph.D. (Munich)
Joyce, Daniel Leo
Katz, Isadore Adams Fall River
Kelleher, William Lawrence Marlboro
Kelley, Julius Goddard Dennis Port
Klein, Bernard Jacob Brockton
Lamb, Edward James Quincy
Laudati, Flavio Henry
Levenson, Albert Boston
Levin, Samuel Max
Lewis, Israel Bernard
Lipsher, Leo
Littlefield, William Dean Berwick, Me.
Locke, Samuel Simon Winchester
Loitman, Clara
Lord, Myron Otis Kezar Falls, Me.
Lynch, Charles Edward Boston
Mades, Myer Leonard
Mahoney, Joseph Aloysius Lawrence
Malinsky, John Peter
Malinsky, Myer
Maxwell, Bernard Love Somerville
Mayer, Walter Henry Allston
McKivergan, Charles Frederick Providence, R. I.
McMackin, John Vinson Revere
Merlin, Samuel Abraham
Merrill, Frederick Guy, Jr Amesbury
Milstein, Abraham Boston
Mirkin, Annie
Moran, Joseph Francis
Moran, Thomas Edward Worcester
Moriarty, William Thomas
Mullholland, Walter Edward Portsmouth, N. H.
Murphy, Eugene Francis Dover, N. H.
Newman, Ernest
Olson, Bertha Catherine Worcester
Padorella, Americo Joseph Newport, R. I.
Parsons, Neil Lehan Dorchester
Piasta, Peter Ferdinand Webster
Pickwick, Harold Curtis
Picozzi, John Avand
Prior, Earle Francis

Quinn, William Ambrose Dorchester
Rafferty, George Edward Lynn
Rapp, Louis William New Britain, Conn.
Rogal, Sidney Bernard Allston
Ross, Donald Central Falls, R. I.
Ross, Margaret Blanche Holyoke
Rubinstein, Samuel Fall River
Russman, Charles Lawrence
Schraut, Louis Carl South Braintree
Schupack, Samuel David New Britain
Scott, Charles Robert, Jr Amesbury
Shapiro, Jacob
Sidel, Nathan Dorchester
Sinreich, Louis Isadore Newport, R. I.
Small, Abraham Solomon Dorchester
Smith, Atherton Carlyle Rockland
Solin, Anne Ethel
Spaulding, Harold Archibald Roxbury
Stone, Charles Clifford Clinton
Sweeney, James Joseph Troy, N. Y.
Titelbaum, Barnett Charles Boston
Toltz, Julius Burt
Triedman, Harry
Ventura, Francis De Salles Fall River
Vickers, Albert Henry Cambridge
Whitney, Ezra Augustus Springfield
Wilbur, Frank Maurice
Wong, Nellie Choy S. Pasadena, Cal.
Young, Ralph Oscar
Zorolow, Abraham Marsel Somerville

# Medical School

[P. O. Address, 416 Huntington Ave., Boston, Mass.]

### Fourth Year

Armstrong, Irving Foster Marlboro
Atkinson, Roderick Melville Jamaica, B.W.I.
Burke, Edward Francis, Ph.G. (Columbia Univ.) Providence, R. I.
Caruso, Septimio
Cohen, Newman Dorchester
Colton, Hubert Porter Dorchester
Corea, George Thomas
Cranz, Alwin Henry Brookline
Cunningham, Thomas, Patrick Pascoag, R. I.
Dahlen, Carl Albert
David, Jesse Mirza
Dunphy, Pierce James, A.B. (Holy Cross Coll.) . Boston
Emard, George Adelbert
Feldman, Aaron Boston
Gately, George Lynde Melrose
Goldberg, Max Manus Lynn
Goldman, Harry
Golini, Carlotta Nicholas Providence, R. I.
Greenberg, Boris Efim Dorchester
Guzzetta, Anthony James Avon, N. Y. B.S. (Univ. of Rochester)
Harris, Walter Callahan
Hatt, Rafe Nelson West Paris, Me.
Hook, Marion, St. Leonards-on-Sea, England
A.S.A., (Asst. Soc. of Apothecaries, England)
Israel, Joseph Gilbert Fitchburg
Jackson, Howard LaFayette Wells Bridge, N. Y.
Jankelson, Isaac Rudolph
Kane, Edna Newell Sypher Boston
Litch, William Isidore, D.M.D. (Tufts College) . Roxbury
Lokrantz, Sven Richard Stockholm, Sweden
MacDonald, Joseph C Beloit, Kansas

M E 1 1 1 W'''
Maroney, Frederick William Springfield
Mason, Harry Edison
McAlpine, Alfred Freeman Somerville
McDonald, Ray Thomas, A.B. (Tufts College) . Medford
McNamara, John Ignatius
Meledy, Joseph Aloysius
Meltzer, Philip Edward, D.M.D.(Tufts College) Roxbury
Moran, Andrew Charles, A.B. (Holy Cross Coll.) Fall River
Morris, James Benjamin Jr Cape Verde Island, Portugal
Mulhern, Joseph Patrick, A.B. (Holy Cross Coll.) Boston
Neill, Roberta Estella
Nichols, Guy Edward Wilmington
Nickum, John Stanley Allentown, Penna.
O'Connor, Alfred Smith A.B. (Holy Cross Coll.) Worcester
Otis, Fessenden Newport Meriden, Conn.
Parker, Charles Clinton, Jr
Polakewich, Isaac
Pratt, Ernest Frederick Lowell
Resnik, Joseph, B.S. (Columbia Univ.) Roxbury
Robinson, Bernard Herman
Rockwell, Llewellyn Harrison Roxbury
Rosen, Kermit Charles Dorchester
Rowley, Philip William Gloucester
Sannella, Salvatore Springfield
Saphirstein, Hyman
Sarason, Lillian
Sawyer, Edward Julius
Shaw, John
Shubert, Julius
Steffen, Anna Elizabeth, A.B. (Oberlin Coll.) . Vermilion, Ohio
Strammer, Myron Abner
Sullivan, Russell Francis
Swasey, Ednah Evitts
Tanner, Monroe Julius Meriden, Conn.
Tooker, Harold Clifton, Ph.B. (Brown Univ.) . Larchmont, N. Y.
Trombley, Walter Vincent
Troupin, Abraham Solomon Stamford, Conn.
Van Gaasbeek, Harold Boston
Villone, Anthony Joseph
Walsh, Jeffrey James, D.M.D. (Tufts College) Fall River
Wheeler, William Davidson
Woodside, John Nelson Watertown
Woolverton, Edgar Frank

### Third Year

Alden, Carmi Rupert Whitman
Barnard, Frederick Joseph Meriden, Conn.
Barstow, Carl Elijah Waltham
Bartlett, Frank Herbert, Jr East Lynn
Baxley, Haughton Whitridge East Boston
Brackett, Nathaniel Parker Waltham
Byrnes, James Edmund Holyoke
Cappiello, Silvestro
Carey, Joseph Henry
Davis, Harry Eugene Portland, Me.
Deitch, John
Dennen, Edward Henry Gloucester
Devere, Earl Robert
Devin, William Francis Westboro
Donovan, William James Norwood
Dushinsky, Samuel Sydney East Boston
Eagan, Owen Louis Fall River
Entwistle, Clayton Ross Monson
Feldman, Louis
Fitch, Emmett Chandler Mooers, N. Y.
Fitzgerald, Joseph William Jamaica Plain
Fleury, Oswald Theodore South Norwalk, Conn.
Forsley, Thomas, Jr
Friborg, Joseph Nathaniel
Fryburg, Charles August Worcester
Gallagher, James Francis, A.B. (Boston College) Newton Centre
Gibson, Howland Allan Newport, R. I.
Gilman, William Henry
Golden, Harry Somerville
Gordon, John Hurter, B.A, (Univ. of South). Washington, D. C.
Gosian, Moses Dorchester
Hennigar, Beatrice Almore (A.B. Acadia Univ.) Chester Basin, N. S.
Honey, Florence Emerson Spencer
Hooper, George Henry Iron Mountain, Michigan
Israelian, Agnes Grace Burlington
Jackson, Edward Joseph Fall River
Johnson, Harold Henry Boston
Kaplan, Jacob Copel Roxbury
Koppel, William Boston
Korb, Harry
Korolick, George Gordon Boston
Lancey, Clifford Scales

Landry, Leonard Pierre Boston
Levethan, Samuel Theodore
Lindblad, Eric Harry Avon
Mackey, Charles Edward South Boston
Mahoney, Ralph Patrick Portland, Me.
Mahoney, William Anthony Providence, R. I.
Mandeville, Ernest Arthur
Martin, Arthur Ellerby
Matteo, Frank Irving
McKenney, Frederic William Lynn
McLaughlin, James Francis
McLaughlin, Joseph Henry East Weymouth
Mengel, John Hehn Easton, Penna.
Meunier, Raymond Royale Indian Orchard
Milward, Francis William, Jr East Boston A.B. (Boston College)
Miner, Harold Cranston, A.B. (Brown Univ.) . East Greenwich, R. I
Morein, Samuel
Mullen, Walter John, A.B. (Holy Cross College) Newton Highlands
Murphy, Albert Bernard Waltham
Murphy, John Michael Abington
Nash, Francis Joseph Westboro
Normandin, Louis Adolphus, Jr Swansea Centre
Ormsby, Edward Bernard Dorchester
Paige, Wilbur Myrtland Lynn
Penn, Harry Lawrence
Phillips, Karl Tristram Amesbury
Raleigh, Walter Melvin Springfield
Reynolds, Francis Albert Dorchester
Rittner, Max
Robert, John Baptiste Wilfred Tilton, N. H.
Rousseau, Wilfred Joseph New Bedford
Ruggles, Ralph Hastings Dorchester
Saunders, Sallie Harding West Medway
Savard, Arthur Joseph Bristol, Conn.
Sciaraffa, John Maria East Orange, N. J.
Segal, Joseph Nathaniel Boston
Shay, Edward Francis Fall River
Sheehan, George Timothy Manchester, N. H. A.B. (Mt. St. Joseph College)
Silberg, Morris Abraham
Silverman, William Yale Revere

Spellissy, Frank Thomas
Second Year
Second Year  Benson, Clarence Kirk Dedham
Boland, Benedict Fenwick, A.B. (Tufts College) Worcester
Boruchoff, Henry Malden
Braverman, Aaron Harry
Brennan, Margaret Elizabeth East Lynn
Brothers, John Henry
Burke, John Edward, A.B. (Boston College) . South Natick
Capecelatro, Alfonso New Haven, Conn.
Chaprasdian, Mihran Abraham Boston A.B. (Central Turkey College)
Conners, Thomas Aquinas Mattapan
Connors, Raymond Earl Providence, R. I.
Cooper, Olive Alfreda
Cormier, Evariste Alfred Leicester
Coulson, Herbert Lawrence
Cruickshank, Frank Sheppard Dorchester Centre
DeCesare, Nicandro Francis Lawrence
Desmond, Margaret Ellen Beverly
Dougherty, Edward Francis, Jr Woonsocket, R. I.
Dowd, Aloysius Francis
Dubins, Joseph Arthur Dorchester
Dunphy, John Joseph, Jr Boston
Edmunds, Charles Storer Boston
Fulstow, Marjorie Norwalk, Ohio
Gagnon, Jules Octave Manchester, N. H.
Galleani, Ilia Wrentham
Geist, Frederick Denkmar Brookline
Genest, Aloria Henry Indian Orchard

Gilroy, Lester James Attleboro
Glickman, Helene Sarah Spring field
Gould, Robert Louis East Boston
Grenberg, Charna Shanghai, China
Grossman, Samuel
Guijarro, Antonio
Hanson, Lester Arthur Worcester
Hanyszewski, Pauline Kathryn Ware
Harrington, Elmer Joseph
Heimlich, Fred Lynn
Herrero, Blas Carlos
Hogan, Daniel John
Horan, Thomas Benedict Fall River
Horan, William Augustine Fall River
Ingalls, Raymond George Berlin, N. H.
Iovanna, Nicholas
Jellis, Walter
Joress, Mark Harry Roxbury
Joyce, Roland Joseph Nashua, N. H.
Kaplan, Julius Arthur Malden
Kassees, Saad Hanna Palestine, Jerusalem
Kerkhoff, Mary Edith Attleboro
Knowlton, Donald Swett Fairfield, Me.
Kotler, Moses George Boston
Kramer, Louis Irving
Lavelle, Gertrude Helen Natick
LeMarbre, Albert Edward Salem
Levy, Phillip Earle
Littlehale, Roy Frederic Needham Heights
Lutecki, Bronislaw Boston
Mace, Roswell Greenwood
MacKinnon, Irville Herbert Attleboro
Manus, Harry Martin
McCusker, Henry Francis
McDonald, Wiliam James Westboro
McLean, John Cassidy Joseph
McSweeney, Joseph Henry Somerville
Montgomery, David Henry
Moses, Alvin Raymond Lynn
Nadel, Samuel Dorchester
Olans, Herman
Oslin, John Francis
Pelchie, William Joseph Shelburne Falls

Pendola, Anthony Salvatore
Phelan, Robert Emmet, B,A. (Yale Univ.) New Haven, Conn.
Poirier, Armand Charles Fairhaven
Randall, Guy Charles Lowell
Rice, Charles
Robbins, Herman, A.B., M.F. (Harvard Univ.) Jamaica Plain
Roberson, Tracey Lloyd
Roberts, Harry Lewis Springfield
Rondeau, Leo Garrigan North Brookfield
Rotman, Nelson Dorchester
Russell, Wilson James Manchester, N. H.
Rust, George Stevens Manchester
Ryan, James Bernard Easthampton
Sacks, Albert David Henry Boston
Siragusa, James Joseph Boston
Smith, Stephen Munro Little Falls, N. Y.
Smith, William Russell, A.B. (Holy Cross) Taunton
Stamas, Theodore Albert
Sterns, Albert Henry New Bedford
Sterrn, Maxwell
Stone, Moses Jacob Dorchester
Sweeney, William Joseph Newburyport
Veve, Miguel, Jr Luquillo, P. R.
Weinberg, Philip Barron Brockton
Weissman, Ruth Boston
Welch, John Laurence, A.B Brockton
West, Gustav Fredrick Boston
Woodman, Marjorie West Medway
Zacks, David
Zelig, David
Zundell, Samuel Charles Fall River
Find War
First Year

Barritt, Robert James
Barron, David
Baxter, George Raymond St. John, N. B.
Benaglia, Carl Peter
Berkowitz, Arthur
Berman, David
Biddle, Stephen Mulford
Block, Harry
Bousquet, Franklyn Philip Worcester

Bowen, Earl Allwood
Bradshaw, George Lane Lawrence
Caldarone, Angelo
Caldicott, George Francis
Chandlee, Gertrude Jackson
Chapnick, Maurice Max New Haven, Conn.
Clark, Orma Lawrence South Acton
Cody, John Michael Peabody
Cohen, Julius William Dorchester
Cohen, Simeon Ansonia, Conn.
Coleman, Robert Martin
Collinson, Arthur William Greenwood
Conlon, Leo Vincent
Cronin, Edward Joseph
Davis, Thomas Francis
Dressler, Morris Lawrence Springfield
Easterbrooks, Harold Arnold Providence, R. I.
Easterling, Ruth Marguerite North Cambridge
Favaloro, John Lynn
Federkiewicz, John Boston
Feingold, Ephraim Worcester
Fielding, Bennett Irving
Gaber, Nathan
Gagnon, Alphonse Paul Fall River
Gibson, David Howard Cambridge
Gilpatrick, James Matthews South Berwick, Me.
Givan, James Alexander Somerville
Glebow, Eleanore Jamaica Plain
Glickman, Alfred Myron Springfield
Goldsmith, Thomas Bartholomew Merrick
Goldstein, Henry
Grandfield, Robert Francis Dorchester
Griffin, Charles Henry Fall River
Grumley, Martin Edward
Harris, Paul Leon Lowell
Hartigan, John Joseph Andover
Hauman, Ralph Nathan Revere
Hazen, Bernice Merriam Manchester, N. H.
Hemenway, Ruth Victoria Williamsburg
Henry, Robert Thomas
Higgins, Francis John
Hinchey, Richard James
Hogan, Charles Henry, Jr Salem
Troguit, Charles Henry, Jr

Hooper, Raymond Ernest Maynard
Hymen, Max Harry New Haven, Conn.
Josselson, Israel Portland, Me.
Kamberg, Samuel
Kelly, Earl Francis
Kontoff, Henry Arthur Dorchester
Kreplick, Morris Spellman
Lanigan, William Nicholas
Laserson, Joseph
Levine, Elijah Louis Lynn
Listernick, Sidney Solomon Everett
Locke, Sophie
Lombardi, Pasquale Frederick Boston
Mackler, David Abram New Bedford
Marchand, Jean Charles Salem
Matzek, Neil Clayton Revere
McGrath, Laurence Wilfred Roxbury
McLaughlin, Allan Everett Framingham
McNamara, John Joseph Lowell A.B. (Holy Cross College)
McQuade, Frank Joseph Manchester, N. H.
Melvin, Edward Gerald Pawtucket, R. I.
Mezer, Joseph Henry Boston
Minah, Franklin James Franklin, N. H.
Murphy, Arthur John Peabody
Murphy, Thomas Burke Lynn
Normandin, Marguerite Alice Laconia, N. H.
Novack, Hyman Allan Dorchester
O'Connell, Maurice Winthrop Roxbury
O'Connell, William Foster Bridgeport, Conn.
Orismonto, Carlo Altobelli Jamaica Plain
Orr, Charles Waldron
Parker, George Leonard
Paul, Frederick Henry, Jr Waltham
Petrillo, Carmen Ralph
Pollack, Bernard Boston
Portnoy, Maurice New Bedford
Prizer, Morris Lynn
Reilly, William Edward
Riendeau, Fernand Maurice
Rood, George Wilson
Ross, Florence Mirick
Ryan, James Patrick

Sachs, Benjamin, Palestine, Jerusalem L.B. (Univ. de Poitiers, France)
Scal, Jacob
Scodel, Bension St. Paul, Minn.
Sharp, Benjamin Samuel
Shea, Daniel William
Siegel, Louis
Silbert, Harry
Silvernail, Raymond Warren Salem
Skvirsky, Solomon Louis Springfield
Soforenko, Harry
Spitz, Jacob
Spiva, Charles
Springer, Ernest
Stasio, Joseph East Boston
Stochaj, John William
Sullivan, Harold Albert
Sullivan, Jeremiah Vincent Fall River
Tartakoff, Samuel West Stoughton
Thompson, James Allan
Tirk, Henry Saul
Tober, Jacob Benjamin Springfield
Tumarkin, Morris Saul
Walsh, John Francis Salem
Watman, Anthony Joseph Lynn
Wight, Freeman Clark
Williams, John Francis Dorchester
Williams, Richard Joseph Lynn
Yaffe, Joseph Philip Boston
Young, Ernest Thomas Boston
Yunitz, John, Jr Everett
~ man, you, y.,
Summary Medical School
· ·
Fourth Year
Third Year
Second Year
First Year
Total

# Dental School

[P. O. Address, 416 Huntington Ave., Boston, Mass.]

#### Third Year

Adams, Philip Edwin Farmington, Me.
Allan, Theodore DeWitt Gloucester
Allen, John Robert North Attleboro
Ames, Walter Frank North Attleboro
Audet, Joseph Achille Boston
Backman, Maurice Peter Lynn
Baker, Horace Earle North Attleboro
Bartlett, Charles Oscar East Holliston
Begley, James Edward Woburn
Belanger, Emile Jean Nashua, N. H.
Bergan, Francis Patrick North Cohasset
Berger, Albert Conrad
van den Besselaar, Hubert Dorchester
Bianchi, Anthony Ferdinand Somerville
Billingham, Oscar Warren Jamaica Plain
Bodin, Leroy George Northampton
Brodbine, John Alfred Beachmont
Brown, Frederic Ward Scituate
Browning, Frank Duane Jewett City, Conn
Brush, David Carey Vineyard Haven
Bucknam, Earle Shepard Lewiston, Me.
Burke, Marcus Francis
Burke, Mark Manuel
Burke, William Edward Westfield
Burnce, Rachel Minnie Boston
Burns, Bernard John
Burns, Leo Edward Natick
Callahan, Henry Francis Peabody
Campbell, Charles Edward Peabody
Casper, Michael Vincent South Boston
Cassidy, Donald William
Chisholm, Walter King West Bridgewater
Church, Dana Earle Springfield
Clancy, William Henry
Clark, Ralph Arra
Clarke George Francis Loquell

Cohen, Jacob
Cohen, Samuel
Cohen, Samuel
Cohen, Simon Isador
Collins, Arthur Eugene Melrose Highlands
Collins, William Henry Bondsville
Consolmagno, Luke Joseph Medford
Cooper, Benedict
Cotter, Harry Norman New York, N. Y.
Coughlan, Alphonsus John St. John, N. B. A.B. (St. Joseph's Univ.)
Crawford, Fred Brown Newport, Vt.
Croisetiere, Leo Albert
Crossland, Ernest Agur
Crowl, Loyal J
Crowley, John Walter Dorchester
Cunningham, Richard Daniel Chicopee Falls
Cupitt, Graham Hunter
Cushing, Ralph William Portland, Me.
Cushner, Jacob Aaron Dorchester
Dacey, Arthur Joseph Marlboro
Dalton, Peter Joseph Marlboro
DeFelice, Michelangelo Boston
Demers, Romeo Felix
DesMarais, Alfred George Somersworth, N. H.
Desmond, Frederick James Beverly
Desmond, John Walter Shirley
Dickson, Robert Earl West Somerville
Dimmick, Meriel Lapham Newburyport
Doherty, Thomas Augustine Lynn
Donahoe, Frederic Florence Lowell
Dufort, Gerald Eugene
Dyon, Oscar Omer Springfield
Eaton, Dean Colton Brunswick, Me.
Edwards, Arthur Francis Salem
Egan, John Joseph O'Neil Dorchester
Ellis, John Henry Peabody
Emmons, Harry Elmer, Jr Brunswick, Me.
Epstein, Louis New Bedford
Fairbanks, Ivan Dean Yonkers, N. Y.
Farrell, Charles Laurence West Newton
Flanders, Charles Chase
Frechette, Emile August

Freedman, Abraham
Friedman, Reuben
Frizzell, Walter Miller Greenfield
Garvey, Arthur Russell Waltham
Gaudet, Leo Andrew St. Joseph, N. B.
Gendreau, Raymond Dracut Centre
Goldsmith, William Erwin Newburyport
Goodman, Morris
Gould, Arthur Richard Braintree
Green, Charles Harrison
Grinnell, Willis Howland
Grotsky, Meyer
Hackett, John Henry Biddeford, Me.
Haffner, Ruth Clarissa Lawrence
Hagerty, Daniel Joseph Nashua, N. H.
Hagerty, John Francis, Jr Nashua, N. H.
Hall, James Murray Paul
Harmer, Milton Ivan Norton, N. B.
Harris, Caspar Dorchester
Harris, Max Jacob Dorchester
Harty, William Francis, Jr Gloucester
Harvey, Charles Edward Roxbury
Heath, William Brewster Malden
Hickie, William Andrew St. George, N. B.
Isherwood, Sidney
Jacobs, Max Henry
Jones, Solomon Jacob
Kefferstein, John Lawrence
Kelleher, John Alexander, Jr
Kelleher, Joseph Jeremiah
Klein, Max Mitchell
Kohlhepp, John Valentine, D.D.S Boston
Lambert, James Joseph
LaRochelle, Arthur Isidore Southbridge
LeBlanc, Arthur Hilarion
Lemont, Mason Metcalf
Levin, Israel
Levin, Nathan Simmon Salem
Levitan, Julius Joseph South Boston
Lima, Frank William Lynn
Lynch, Ambrose Henry
Mackay, Edgar Forrester Waverley
Margolis, David Henry Boston

Maycock, James Herbert Amesbury
McAuliffe, Philip Leo Wakefield
McCarthy. Timothy John, Jr South Boston
McClure, Nathan Francis Atlantic
McCormick, John James Springfield
McGrath, James Harold
McKenna, Ernest James Dorchester
McKenna, Paul Joseph Dorchester
McLellan, William Leonard Indian River, P. E. I.
McNary, Ralph Henry Chelsea
Michelson, Myer Warren West Roxbury
Moberg, Frank Walter
Morrill, Everett Elverdo Dorchester
Moskow, Rose Dorchester
Murray, Charles Henry Worcester
Neumann, Erna Elisabeth Bremen, Germany
Norton, Thomas Keene Lexington
Nulty, Thomas Edmund
O'Connor, Harry Newman Revere
O'Connor, John Francis Fitchburg
O'Hear, Francis Xavier Thompsonville, Conn.
O'Neil, Frederick William Saranac Lake, N. Y.
Parsons, Fred Anthony Patten, Me.
Pennine, Saverio Nicandro
Perelman, Joseph Max Burlington, Vt.
Phipps, Walter Emerson
Podolinsky, Solomon Benjamin Dorchester
Pofcher, Joseph
Powers, James Harold, Peabody
Powers, Richard Patrick
Reardon, Timothy Henry, Jr Lowell
Reed, Leonard Harold Keswick Ridge, N. B.
Richards, Clifford Stephen
Robertson, George Waldo North Abington
Rosenblum, David Samuel
Ross, Samuel
Ross, Stanley Huggins Malden
Rothblatt, George Willimantic, Conn.
Rourke, Arthur Thomas Fitchburg
Rubin, Joseph Samuel Boston
Ryan, John Thomas Avon
Sagansky, Harry Boston
Sager, Louis Emmons Roslindale
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Saklad, Samuel
Savage, Gale Russell
Schore, Herman
Schwartz, Bernard Samuel
Schwartz, Hyman Boston
Scott, Bessie Bonker
Shapiro, Harry
Sheehan, Albert Thomas Wallingford, Conn.
Sheldon, Robert Francis
Shubow, Abraham Sidney Dorchester
Siskind, Berthold Lawrence
Small, Wilbert Merrill Quincy
Snell, John Philip Lynn
Stevens, Roland Silas Monhegan, Me.
Stewart, Roy Bryson Faneuil
Stokes, Samuel Hartley Rochester, N. H.
Straw, Merle David Guilford, Me.
Stritch, Bertram Edward
Strong, William Henry East Boston
Sullivan, Frederick Devlin Shelburne Falls
Sullivan, Jeremiah Joseph Medway
Sullivan, Louis Edmund Maynard
Surabian, Mihran Charles Boston
Tetlow, Allen Redfern
Teutonico, Arthur Iginio Lawrence
Thomas, Kenneth Joshua Calais, Me.
Threshie, Charles
Todd, Joseph Donald · · · Dorchester
Trundy, Levi Searsport, Me.
Turner, Ashleigh Wentworth Meductic, N. B.
Voge, William Louis Jamaica Plain
Walker, Edward Shipley
Walsh, Edward Thomas
Walsh, Lewis Edward Everett
Weener, Joseph
Wein, Theodore
Weisman, Frank
Welch, Francis Joseph
Weymouth, Charles Haines, Jr Fisherville
Whittemore, Forrest James
Wholey, Timothy Joseph Lawrence
Whoriskey, George Richard Cambridge
Wilder, Walter Morse

Williamson, Kenneth Gillmor			٠.	. Second Falls, N.B.
Wills, Albert Cornelius		٠.	٠.	. Buxton, British Guiana
Woods, Edward Patrick			s.	. Newburyport
Woodworth, Randall Nelson, Jr.				. Concord Junction
Yando, Arthur Heli	 ٠,	٠.		. Fitchburg
Zimmerman, Harold		٠,	٠.	. Springfield

### Second Year

Abbott, George Isaac Bethel, Vt.
Abramovitz, Max
Adams, Warren Lincoln Somerville
Anderson, Charles Ranquas East Longmeadow
Andrews, Earle Ralph
Archambeault, Arthur New Bedford
Barry, Jeremiah Francis Everett
Barry, John Francis South Manchester, Conn.
Bates, Carl Jewell Winthrop, Me.
Baxter, Charles Francis Waterville, Me.
Bernot, Ruth Florida
Bethell, Russell Howard
Blasi, Arthur Newark, N. J.
Boire, Paul
Bommer, Arno Max Chelsea
Bonney, Dorothy Geierstein Arlington
Boyaner, Frank St. John, N. B.
Brooks, Frederick Bynum
Brown, Emery Hartley
Bulfinch, Fred Lawrence
Bunnell, Shirley Abel Wales, Me.
Butler, Percival Forbes
Byrnes, John Joseph
Cahill, Francis Michael Worcester
A.B. (Holy Cross College)
Carmody, Thomas George
Caron, Milio Valmor Lewiston, Me
Cassidy, Francis Leo Millbury
Clancy, James Fred Boston
Cleary, John Albert
Cleary, William Francis
Cohen, Abraham Benjamin Springfield
Coleman, Alfred Mitchell East Boston
Collette, Albana Hugo Spencer
Congdon, James Leonard Swampscott
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Connell, Ralph Springfield
Courant, Reginald
Crowley, Joseph Henry
Curran, James Leo
Daitch, Abraham
Davis, Russell Henry North Attleboro
Deane, Edward Thornton
Desjardins, Louis Philip
Diamond, Robert Ira East Boston
Dion, Alfred Joseph
Donlon, Carl James
Dowd, Thomas Francis Fall River
Dunn, Frank Henry
Egger, Eldon Fearing Brockton
Eldridge, Arthur Burnside
Emery, Norman Bartlett York Beach, Me.
Enholm, Philip Andrew Newton Lower Falls
Erlenbach, Franklin Michael, Jr Brookline
Everett, Raymond Charles Waltham
Fallon, Paul Owen
Fenton, Joseph William Lawrence
Fenton, Maurice John Springfield
Fine, Harry Israel Canobie Lake, N. H.
Finnegan, John Patrick
Fishman, Leopold
Fitzgerald, Edmund John
Foss, Willard Harold Leominster
Franchere, Harry Birch North Adams
Freelander, Jacob Dewey
Garland, Gordon Egbert Nashua, N. H.
Genn, Benjamin Harris
Gideon, Jessie Katharine
Ginn, James Richard West Harwich
Ginsberg, Harold Springfield
Ginsberg, Joseph Springfield
Gleitsman, Adolphus Richard Somerville Golden, Edward Warren East Boston
Goldstein, Moses
Gough, Martin George Everett
Grady, Frederick Blessington
Grady, John Joseph
Grady, Walter Joseph Worcester

Graichen, Walter Gustave Lawrence
Hannigan, Timothy William, Jr
Hannon, John Francis
Hare, Benjamin Springfiela
Healey, William Leo Clinton
Hobbs, Edward Stanley, Jr Stony Brook
Hodges, Kenneth Bertrand North Attleboro
Horrigan, Howard Patrick Holyoke
Hughes, Wilbur Robert Somerville
Hunter, James Stanley
Jacobs, Isidore
Jennings, Clifford Milton Beach Park, Conn.
Just, José
Kalin, Harry Hyman Leominster
Kandib, Sophia Dorchester
Karamallis, Seraphim
D.D. (Constantinople Theological College)
Kassels, Harry Isaac
Keane, Edward Francis Manchester, N. H.
Kelley, Francis Xavier Milford
Kelley, Robert Emmet Pawtucket, R. I.
Kempton, Carl Fletcher Rangeley, Me.
Kestenbaum, Edward New Bedford
King, Frank Robinson Fort William, Ont.
Kovav, George South Boston
Laird, Henry Sperry Montpelier, Vt.
Lanagan, Arthur Gregory Waltham
Lantz, Carl Aldolph Alvin Websterville, Vt.
Lasker, Robert Reuben
LeBourdais, Joseph Thomas Brunswick, Me.
LeClair, Harry Leigh Bristol, R. I.
Levenson, Louis Charles Dorchester
Levine, Leo Israel , , , Dorchester
Levy, Clayman Carl Lynn
Lipkind, Joshua Samuel · · Somerville
Lloyd, Frederick Alton Somerville
Looney, Daniel Edward Allston
Lounsbury, Paul, Jr Roslindale
Lowell, Grace Evelyn Wilmington
Lynch, Joseph Francis Holyoke
Macauley, Forrest Edward Gloucester
Machanic, Morris Robert Burlington, Vt.
Mackintosh, Robert Murdoch Ludlow

Marrs, Francis Jerome
Martin, James Harold
McCarthy, John Henry Dorchester
McCarty, Frank Joseph
McCaul, Fred Leo
McCormick, Everett Harold Holyoke
McCoy, John Martin
McDonald, Hugh Joseph Southboro
McGowan, Paul Clare Somerville
McLean, Frank Malcolm
Miller, Eli
Moran, Augustine James Springfield
Mottley, Frank Wilbur
Murphy, Charles Gerard Wollaston
Murray, John Francis Dedham
Muzzey, Ivor Paine
Nackley, Najeeb
Nelson, George Edwin Worcester
Nevens, George Sanford
Nicholson, Benjamin Lawrence
Nikula, Frank Oscar Fitchburg
Norris, George Francis Southampton
Norton, Thomas Augustus Rutland, Vt.
Nutter, Doris
Oliver, Alfred Joseph
O'Meara, Catherine Virginia Arlington Heights
O'Neill, Harry Martin Nashua, N. H.
O'Regan William Leo East Boston
Patriquin, Forrest Douglas Newburyport
Perri, Nicholas Peter
Pottle, Arthur Freeman Meredith, N. H.
Pratt, Herbert Louis Nashua, N. H.
Reid, Thomas Joseph East Weymouth
Reid, William Francis
Reines, Harold Bear
Ring, Frank Edward Lynn
Roberts, Russell Fair Haven, Vt.
Ronan, Helen Elizabeth Salem
Rouslin, John Jacob
Sanders, Allbert Carter, Jr Jersey City, N. J.
Saunders, Earl Augustus Deer Isle, Me.
Schwartz, Samuel Irving
Scott, Frank Joseph
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Selinsky, Joseph Augustus
Sessler, Albert Rank Boston
Shea, John Ignatius, A.B. (Boston College) . Jamaica Plain
Shea, Matthew Francis Cambridge
Skofield, Raymond Harold Houlton, Me.
Smith, Howard Carlton Providence, R. I.
Smith, Maynard Maxwell Milltown, Me.
Spear, Harold Elmer St. Albans, Vt.
Spencer, Bradford Jenckes South Manchester, Conn.
Stephenson, Milton Cabot Belfast, Me.
Stewart, Charles Edward Fort William, Ont.
Sundstrom, George Leroy Worcester
Tassé, Joseph René Worcester
Taylor, Bernard Henry Springfield, Vt.
Thresher, Irene Celeste Southbridge
Thurman, Anna Dorchester
Titus, Paul King West Medford
Tomasi, Thomas
Turner, Charles Hamilton
Vasiliou, Stephen Theodore Boston
Walsh, James Edward, Jr
Wark, Roy Henry
Warren, Ralph Duncan Bath, Me.
Weeks, Cornelius
Weeks, Hadley Fairfield Calais, Me.
Weiner, Max
Westhaver, Ellerd Hunt Atlantic
Wilder, Herbert Whiton
Wood, Leland Charles St. Albans, Vt,
Wright, Herbert Francis North Attleboro
Wright, Ida Ellen
Zwoden, Abram

## Second Year - New Course

Altman, Sydney Benjamin			•,	٠,				•,	. Clinton
Callahan, John Francis .	~	٠,	٠,		٠,	٠,			. Provincetown
Gregg, James Aloysius	٠,	٠,	٠,	٠		٠	٠	۰	. Natick
Holland, Charles Leo	٠.			٠,	٠,		٠,	٠,	. South Boston
MacBride, Charles Clarke	٠,		٠,	٠,	٠,			٠.,	. Brockton
Scanlon, Thomas Michael			٠,	٠.	٠,	٠,	٠,	٠.	. Fitchburg

### First Year

Aldrich, Frederick Raymond Concord, N. H.
Alexanian, Sooren Simon
Alkon, Marie Celia Portsmouth, N. H.
Ashworth, Thomas Cunliffe Waldoboro, Me.
Barron, Harry Charles Wakefield
Bradley, Harry John Milford
Brady, Edward Dunovan
Casey, Joseph Henry Dorchester
Chadwick, Charles Frederic Lawrence
Cohen, Samuel East Boston
Collins, Frank Edward Jamaica Plain
Copeland, Harold Ellis Rochester, N. H,
Corcoran, William Henry Wakefield
Dadkin, Benjamin Boston
Daley, Martin Joseph Dorchester
Dalrymple, John Richardson Millbury
Decter, Samuel Framingham
Demers, Albert Joseph
Devine, Irving Domonic
Dowd, Edward Francis, Jr Dorchester
Dunphy, Albert Francis Providence, R. I.
Dyer, William Oscar Norwich, Conn.
Fallon, William Thomas Concord
Feola, Joseph Newton
Fishman, Hyman Somerville
Gardner, Milo Fay Lu Verne, Ia.
Goldberg, Hyman Harry Boston
Grossman, Israel William East Boston
Gumausky, Andrew Joseph, Jr South Boston
Hedolin, Cedric Bryant
Hewett, Joseph Charles Newburyport
Higgins, Laurence Granville Ellsworth, Me.
Jones, Allan Leman
Jones, George Everett Somerville
Kartz, Jeannette
Kazis, Harry
Kierstead, Heber Bertrand ,
Kiley, John Patrick
Koobatian, Mihran John Worcester
Korb, Charles
LaBelle, George Armand West Springfield
Lake, Fred William Mechanicville, N. Y

	Laliberte, Charles Conrad
	Larkin, John Joseph, Jr Waltham
	Lasselle, Harry Stearns Norway, Me.
	LeClaire, Romeo Hermidas North Grafton
	Levine, Abraham Morris
	Lucey, Frederick Joseph
	Mahoney, Frederick Anthony South Boston
	Malaney, Bernard Charles
	Marshall, Joseph Sydney Rockport, Me.
	Martin, James Ernest, Jr Roslindale
	Martineau, Horace William Cambridge
	McCarthy, Francis Wesley Roxbury
	McNall, Charles Ivon Malden
	Mellen, Benjamin Augustine South Boston
	Mongeau, Harry Joseph Montello
	Mooradkanian, Mesrop Nicholas Lawrence
	Moran, William Henry Cambridge
	Morris, Andrew Vincent Washington Belmar, N. J.
	Moyse, Joseph Chauncey Greenville, Miss.
	Mulhare, Paul Leo Lawrence
	Newman, Harold Winship Melrose
	Oberg, Carl Alvard Worcester
	O'Brien, Edward Joseph
	O'Connor, Charles Francis Dorchester
	O'Hear, John Francis, Jr Thompsonville, Conn.
	Parente, Angelo Michael
	Permuth, Victor
	Philbin, Walter Raymond
п	Raddin, Frederick Reginald
	Reynolds, Clarence Leslie
	Rice, Harold Keith Calais, Me.
	Robertson, William Hoare Beverly
	Rock, Alton Austin Websterville, Vt.
	Ruggles, Roland Frederick Dorchester
1	Schandler, Loyd Otto Gorham, N. H.
	Shea, John Joseph Providence, R. I.
1	Sheehan, John Patrick Lawrence
1	Sherrard, Vernon Fred Presque Isle, Me.
-	Shifman, Jacob Boston
-	Smith, James Edward Everett
-	Steele, Richard Aberdeen P. of S., Trinidad, B.W.I.
-	Sterling, Louis
0	Stone, Aaron Hirsh Dorchester
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## TUFTS COLLEGE

## SUMMARY

Trustees	8				
CORPS OF INSTRUCTION					
Emeriti					
President and Professors 50					
Associate Professors					
Assistant Professors					
T - stronger					
Instructors					
A * 1 1					
Assistants					
Teaching Fellows	-				
	_				
31	0				
STUDENTS					
SCHOOL OF LIBERAL ARTS:					
Seniors					
Juniors					
Sophomores					
Freshmen					
Unclassified	5				
JACKSON COLLEGE FOR WOMEN:	5				
Seniors					
Juniors					
Sophomores					
Freshmen					
Specials					
Unclassified	0				
Engineering School:					
Seniors					
Juniors					
Sophomores 60					
Freshmen					
Unclassified	0				
	0				
	4				
	8				
TWO-YEAR PRE-MEDICAL COURSE					
MEDICAL SCHOOL:					
Fourth Year					
Third Year					
Second Year					
First Year	. 4				
DENTAL SCHOOL:	4				
Second Year					
	7				
First Year	-				
Total registration of students	9				
Names appearing twice	4				
Total number of students	5				





# A Statement of the Requirements in the Subjects that may be counted for Admission to Tufts College

Elementary English.

Three units.

Requirements for 1917-1919

The study of English in school has two main objects: (1) command of correct and clear English, spoken and written; (2) ability to read with accuracy, intelligence and appreciation.

Grammar and Composition.

One and one-half units.

The first object requires instruction in grammar and composition. English grammar should ordinarily be reviewed in the secondary school; and correct spelling and grammatical accuracy should be rigorously exacted in connection with all written work during the four years. The principles of English composition governing punctuation, the use of words, sentences, and paragraphs should be thoroughly mastered; and practice in composition, oral as well as written, should extend throughout the secondary school period. Written exercises may well comprise letter-writing, narration, description, and easy exposition and argument. It is advisable that subjects for this work be taken from the student's personal experience, general knowledge, and studies other than English, as well as from his reading in literature. Finally, special instruction in language and composition should be accompanied by concerted effort of teachers in all branches to cultivate in the student the habit of using good English in his recitations and various exercises, whether oral or written.

Literature.

One and one-half units.

The second object is sought by means of two lists of books headed respectively *Reading* and *Study*, from which may be framed a progressive course in literature covering four years. In connection with both lists, the student should be trained in reading aloud and be encouraged to commit to memory some

of the more notable passages both in verse and in prose. As an aid to literary appreciation, he is further advised to acquaint himself with the most important facts in the lives of the authors whose works he reads and with their place in literary history.

## READING (A)

The aim of this course is to foster in the student the habit of intelligent reading and to develop a taste for good literature, by giving him a first-hand knowledge of some of its best specimens. He should read the books carefully, but his attention should not be so fixed upon details that he fails to appreciate the main purpose and charm of what he reads.

With a view to large freedom of choice, the books provided for reading are arranged in the following groups, from each of which at least two selections are to be made, except as otherwise provided under Group I:

Group I. Classics in Translation.—The Old Testament, comprising at least the chief narrative episodes in Genesis, Exodus, Joshua, Judges, Samuel, Kings, and Daniel, together with the books of Ruth and Esther; the Odyssey, with the omission, if desired, of Books I, II, III, IV, V, XV, XVI, XVII; the Iliad, with the omission, if desired, of Books XI, XIII, XIV, XV, XVII, XXI; the Aeneid. The Odyssey, Iliad, and Aeneid should be read in English translations of recognized literary excellence.

For any selection from this group a selection from any other group may be substituted.

Group II. Shakespeare.—Midsummer Night's Dream; Merchant of Venice; As you Like It; Twelfth Night; The Tempest; Romeo and Juliet; King John; Richard II; Richard III; Henry V; Coriolanus; Julius Cæsar\*; Macbeth\*; Hamlet\*.

Group III. *Prose Fiction*. Malory's Morte d'Arthur (about 100 pages); Bunyan's Pilgrim's Progress, Part I; Swift's Gulliver's Travels (voyages to Lilliput and to Brobdingnag); DeFoe's

<sup>\*</sup> If not chosen for study under (B).

Robinson Crusoe, Part I; Goldsmith's Vicar of Wakefield; Frances Burney's Evelina; Scott's Novels (any one); Jane Austen's Novels (any one); Maria Edgeworth's Castle Rackrent, or The Absentee; Dickens's Novels (any one); Thackeray's Novels (any one); George Eliot's Novels (any one); Mrs. Gaskell's Cranford; Kingsley's Westward Ho! or Hereward, the Wake; Reade's The Cloister and the Hearth; Blackmore's Lorna Doone; Hughes's Tom Brown's Schooldays; Stevenson's Treasure Island, or Kidnapped, or Master of Ballantrae; Cooper's Novels (any one); Poe's Selected Tales; Hawthorne's The House of the Seven Gables, or Twice-Told Tales, or Mosses from an Old Manse; a collection of Short Stories by various standard writers.

Group IV. Essays, Biography, etc.—Addison and Steele's The Sir Roger de Coverley Papers, or Selections from the Tatler and Spectator (about 200 pages); Boswell's Selections from the Life of Johnson (about 200 pages); Franklin's Autobiography; Irving's Sketch Book (about 200 pages), or Life of Goldsmith; Southey's Life of Nelson; Lamb's Essays of Elia (about 100 pages); Lockhart's Life of Scott (about 200 pages); Thackeray's Lectures on Swift, Addison, and Steele in the English Humourists; Macaulay's Lord Clive, Warren Hastings, Milton, Addison, Goldsmith, Frederic the Great, Madame d'Arblay (any one); Trevelyan's Life of Macaulay (about 200 pages); Ruskin's Sesame and Lilies, or Selections (about 150 pages); Dana's Two Years before the Mast; Selections from Lincoln, including at least the two Inaugurals, the Speeches in Independence Hall and at Gettysburg, the Last Public Address, and the Letter to Horace Greeley, together with a brief memoir or estimate; Parkman's The Oregon Trail; Thoreau's Walden; Lowell's Selected Essays (about 150 pages); Holmes's The Autocrat of the Breakfast Table; Stevenson's An Inland Voyage, and Travels with a Donkey; Huxley's Autobiography, and selections from Lay Sermons, including the addresses on Improving Natural Knowledge, A Liberal Education, and A Piece of Chalk; a collection of essays by Bacon, Lamb,

DeQuincey, Hazlitt, Emerson, and later writers; a collection of Letters by various standard writers.

Group V. Poetry. Palgrave's Golden Treasury (First Series), Books II and III, with special attention to Dryden, Collins, Gray, Cowper, and Burns; Palgrave's Golden Treasury (First Series), Book IV, with special attention to Wordsworth, Keats, and Shelley (If not chosen for study under B); Goldsmith's The Traveller, and the Deserted Village; Pope's The Rape of the Lock; a collection of English and Scottish Ballads, as, for example, some Robin Hood ballads, The Battle of Otterburn, King Estmere, Young Beichan, Bewick and Grahame, Sir Patrick Spens, and a selection from later ballads; Coleridge's The Ancient Mariner, Christabel, and Kubla Khan; Byron's Childe Harold, Canto III or IV, and The Prisoner of Chillon; Scott's The Lady of the Lake, or Marmion; Macaulay's The Lays of Ancient Rome, The Battle of Naseby, The Armada, Ivry; Tennyson's The Princess, or Gareth and Lynette, Lancelot and Elaine, and The Passing of Arthur; Browning's Cavalier Tunes, The Lost Leader, How They Brought the Good News from Ghent to Aix, Home Thoughts from Abroad, Home Thoughts from the Sea, Incident of the French Camp, Hervé Riel, Pheidippides, My Last Duchess, Up at a Villa— Down in the City, The Italian in England, The Patriot, The Pied Piper, "De Gustibus"—, Instans Tyrannus; Arnold's Sohrab and Rustum, and the Forsaken Merman; Selections from American Poetry, with special attention to Poe, Lowell, Longfellow, and Whittier.

## STUDY (B)

This part of the requirement is intended as a natural and logical continuation of the student's earlier reading, with greater stress laid upon form and style, the exact meaning of words and phrases, and the understanding of allusions. The books provided for study are arranged in four groups, from each of which one selection is to be made.

Group I. Drama.—Shakespeare's Julius Cæsar, Macbeth, Hamlet.

Group II. *Poetry.*—Milton's L'Allegro, Il Penseroso, and either Comus or Lycidas; Tennyson's The Coming of Arthur, The Holy Grail, and The Passing of Arthur; the selections from Wordsworth, Keats, and Shelley in Book IV of Palgrave's Golden Treasury (First Series).

Group III. *Oratory*.—Burke's Speech on Conciliation with America; Macaulay's Two Speeches on Copyright, and Lincoln's Speech at Cooper Union; Washington's Farewell Address, and Webster's First Bunker Hill Oration.

Group IV. Essays.—Carlyle's Essay on Burns, with a selection from Burns's Poems; Macaulay's life of Johnson; Emerson's Essay on Manners.

#### Examination.

However accurate in subject-matter, no paper will be considered satisfactory if seriously defective in punctuation, spelling, or other essentials of good usage.

The examination will be divided into two parts:

### 1. Grammar and Composition.

In grammar and composition, the candidate may be asked specific questions upon the practical essentials of these studies, such as the relation of the various parts of a sentence to one another, the construction of individual words in a sentence of reasonable difficulty, and those good usages of modern English, which one should know in distinction from current errors. The main test in composition will consist of one or more essays, developing a theme through several paragraphs; the subjects will be drawn from the books read, from the candidate's other studies, and from his personal knowledge and experience quite apart from reading. For this purpose the examiner will provide several subjects, perhaps eight or ten, from which the candidate may make his own selections. He will not be expected to write more than four hundred words per hour.

#### 2. Literature.

The examination in literature will include:

- (a) General questions designed to test such a knowledge and appreciation of literature as may be gained by fulfilling the requirements defined under Reading (A), above. The candidate will be required to submit a list of the books read in preparation for the examination, certified by the principal of the school in which he was prepared; but this list will not be made the basis of detailed questions.
- (b) A test on the books prescribed for study, which will consist of questions upon their content, form, and structure, and upon the meaning of such words, phrases, and allusions as may be necessary to an understanding of the works, and an appreciation of their salient qualities of style. General questions may also be asked concerning the lives of the authors, their other works, and the periods of literary history to which they belong.

#### Elementary German.

Two units.

It is expected that the candidate will have studied the subject in a systematic course for two school years, each covering the equivalent of 120 sixty-minute periods, during which special attention will have been given to pronunciation and to writing from dictation, as well as to the use of clear and idiomatic English in translation.

The examination will consist of two parts:

- (a) The translation into German of easy English sentences, to test the candidate's knowledge of the following subjects: the declension of nouns, adjectives, and pronouns; the conjugation of weak and the more frequently recurring strong verbs; the prepositions and cases which they govern; the simpler uses of modal auxiliaries; the elementary rules of syntax and word order. Proficiency may also be tested by questions on these topics.
- (b) The translation at sight of easy German prose. It is believed that the requisite facility may be acquired by the reading

of from two to three hundred pages of easy German, with preference given to narrative style.

[The following list is made up from works suitable for reading in preparation for this examination; Anderson's Bilderbuch ohne Bilder; Arnold's Fritz auf Ferien; Baumbach's Schwiegersohn: Heyse's Hochzeit auf Capri; Storm's Immensee; Leander's Träumereien; Roth's Einnordischer Held; Benedix, Der Prozess; Wilhelmi's Einer muss heiraten; Fulda's Das verlorene Paradies.]

In place of the examination in Elementary German a candidate may offer the examination of the College Entrance Examination Board in German A.

#### Intermediate German.

One unit

It is expected that the candidate will have pursued, in addition to the work done in preparation for Elementary German, an additional year's work of 120 hours. He should thus have acquired the ability to translate with considerable facility ordinary prose, similar to that of the preparatory course, and to answer briefly in German questions asked in that language by the instructor. Oral practice and dictation should be continued in this third year and a somewhat thorough acquaintance obtained with the rules of syntax, particularly with the subjunctive and infinitive moods; attention should also be given to the simpler facts of word formation—roots, prefixes and suffixes.

The examination will consist of two parts:

- (a) The translation into German of a connected passage of simple English, paraphrased from some German text.
- (b) The translation at sight of passages of ordinary German prose. It is believed that the requisite facility may be acquired by reading in addition to the amount stated for Elementary German, about four hundred pages of narrative and dramatic prose and verse.

[The following list is made up from works suitable for reading in preparation for this examination: Ebner-Eschenbach's Freiherren von Gemperlein; Gerstäcker's Irrfahrten; Hoffmann's Historische Erzählungen; Meyer's Gustav Adolfs Page; Riehl's Burg Neideck und Fluch der Schönheit;

Freitag's Aus dem Staat Friedrichs des Grossen, and die Journalisten; Schiller's Geisterseher, Neffe als Onkel, and Balladen; Scheffel's Trompeter von Säkkingen.]

In place of the examination in Intermediate German a candidate may offer the examination of the College Entrance Board in German B.

#### Advanced German.

One unit.

This examination is open to candidates who have had the equivalent of a four years' course, with an average of 120 full hour periods per year. At the end of this course the student should be able to read, after brief inspection, any (save technical) modern German literature, if free from unusual textual difficulties; to put into German a passage of simple English prose, or to write in that language a brief theme on some assigned topic within his range; and to answer in German questions relating to the lives and certain works of the authors studied.

The examination will consist of three parts:

- (a) The writing in German of a paragraph, original or translated.
- (b) The translation into English of extracts from at least three distinctively different authors. It is believed that the requisite facility may be acquired by reading in addition to the amount mentioned under Intermediate German, about five hundred pages of good literature in prose and verse.
- ( $\varepsilon$ ) An oral test of proficiency in hearing and pronouncing German.

[The following list is made up from works suitable for reading in preparation for this examination: Fouque's Undine; Scheffel's Ekkehard; Ludwig's Zwischen Himmel und Erde; Freytag's Soll und Haben; Hauff's Lichtenstein; Goethe's Dichtung und Wahrheit (extracts), Die neue Melusine, Hermann und Dorothea; Lessing's Minna von Barnhelm, Schiller's Wilhelm Tell, Jungfrau von Orleans, Geschichte des dreissigjährigen Krieges (third book); Grillparzer's Sappho; Kleist's Prinz von Homburg; Fulda's Talisman.]

In place of the examination in Advanced German, a candidate may offer the examination of the College Entrance Examination Board in German BC.

#### Elementary French.

Two units

It is expected that the candidate will have studied the subject in a systematic course for two school years, each covering the equivalent of 120 sixty-minute periods, during which special attention will have been given to pronunciation and to writing from dictation, as well as to the use of clear, idiomatic English in translation

The examination will consist of two parts:

- (a) The translation into French of easy English sentences to test the candidate's knowledge of the following subjects: the conjugation of the regular and the most frequently recurring irregular verbs; the forms and positions of personal pronouns; the uses of the other pronouns and of possessive, demonstrative, and interrogative adjectives; the variation of nouns and adjectives for gender and number (except rare cases); the partitive construction. Proficiency may also be tested by questions on these topics.
- (b) The translation at sight of a passage of easy French. It is believed that the requisite facility may be acquired by the reading of not less than three hundred and fifty pages of simple prose, with preference given to narrative.

[The following list is made up from works suitable for reading in preparation for this examination: The easier stories of Daudet, Verne, and Erckmann-Chatrian; Foa's Le petit Robinson and Contes Biographiques; Enault's Le Chien du Capitaine; Malot's Sans Famille; About's Le Roi des Montagnes; Labiche and Martin's La Poudre aux Yeux and Le Voyage de M. Perrichon; Sarcey's Le Siège de Paris.]

In place of the examination in Elementary French a candidate may offer the examination of the College Entrance Examination Board in French A.

#### Intermediate French.

One unit

It is expected that the candidate will have passed, in addition to the work done in preparation for Elementary French, an additional year's work of 120 hours. He should thus have acquired the ability to translate with facility ordinary prose or verse similar to that of the preparatory course, and to answer briefly

in French questions asked in that language by the instructor. Oral practice and dictation should therefore be continued in this third year, together with a more detailed study of syntax, particularly of the use of moods and tenses, and of word formation and common idiomatic phrases.

The examination will consist of two parts:

- (a) The translation into French of a connected passage of simple English.
- (b) The translation at sight of passages of ordinary French prose or dramatic verse. It is believed that the requisite facility may be acquired by reading, in addition to the amount required for Elementary French, not less than four hundred pages of prose and verse, preference still being given to narrative form.

[The following list is made up from works suitable for reading in preparation for this examination: About's stories; Daudet's La Belle-Nivernaise; La Brète's Mon Oncle et mon Curé; Loti's Pêcheur d'Islande; George Sand's Les Maîtres Mosaïstes; Mérimée's Colomba; Thierry's Récits des Temps mérovingiens; Thiers's L'Expédition de Bonaparte en Egypte; Vigny's La Canne de Jonc; Corneille's Horace; Molière's L'Avare and Le Bourgeois Gentilhomme; Racine's Athalie; Augier and Sandeau's Le Gendre de M. Poirier; Coppée's poems.]

In place of the examination in Intermediate French a candidate may offer the examination of the College Entrance Examination Board in French B.

#### Advanced French.

One unit.

This examination is open to candidates who have had the equivalent of a four year's course, with an average of 120 full hour periods per year. At the end of this course the student should be able to read at sight, with the help of a vocabulary of special or technical expressions, difficult French of not earlier than the seventeenth century; to write in French a short essay on some simple subject connected with the works read in preparation, and to take part in a simple conversation in French.

The examination will consist of three parts:

(a) The writing in French of an original passage of at least 150 words on some assigned subject.

- (b) The translation into English of extracts from at least three distinctly different authors. It is believed that the requisite facility may be acquired by reading, in addition to the amount mentioned under Intermediate French, from six hundred to one thousand pages of standard French, inclusive of works merely commented upon in class.
- (c) An oral test of proficiency in hearing and pronouncing French.

[The following list is made up from works suitable for reading in preparation for this examination: Taine's Origines de la France contemporaine; Sainte-Beuve's Causeries du Lundi (Holt Ed.); Voltaire's Prose (Heath Ed.); Balzac's La Recherche de l'Absolu; Dumas' Les trois Mousquetaires (Ginn Ed.); Pelissier's Anthologie des Prosateurs français contemporains (Paris, Delagrave Ed.); Racine's Andromaque, Britannicus, Athalie; Corneille's Cinna and Polyeucte; Molière's Les Précieuses Ridicules; Beaumarchais' Mariage de Figaro; Hugo's Hernani and Ruy Blas.]

In place of the above, a candidate may offer the examination of the College Entrance Examination Board in French BC.

## Elementary Latin.

Two units.

The Latin reading shall be not less in amount than Cæsar, Gallic War, I—IV, and should be selected by the schools from Cæsar (Gallic War and Civil War) and Nepos (Lives). Candidates will be examined in translation at sight of passages from the above authors, also in grammar and composition.

In place of the examination for two units in Elementary Latin a candidate may offer the following examination of the College Entrance Examination Board:

Latin, 3.

#### Intermediate Latin.

One unit.

The Latin reading, without the prescription of particular authors and works, shall be not less in amount than Cæsar, Gallic War, I—IV, and Cicero, the orations against Catiline, for the Manilian Law, and for Archias; this reading should be selected from Cæsar (Gallic War and Civil War) and Nepos (Lives), Cicero (orations, letters, and De Senectute) and Sallust (Catiline and Jugurthine War).

Candidates will be examined in translation at sight of passages from Cæsar and Cicero. The vocabulary, constructions, and range of ideas will be suited to the preparation secured by the reading indicated above. There will also be an examination on the following prescribed reading: Cicero, orations for the Manilian Law and for Archias.

Or the requirement in poetry, as defined under Advanced Latin, may be offered as optional in place of the third year prose.

The examinations in grammar and composition will demand thorough knowledge of all regular inflections, all common irregular forms, and the ordinary syntax and vocabulary of the prose authors read in school, with ability to use this knowledge in writing simple Latin prose. The words, constructions, and range of ideas called for in the examination in composition will be such as are common in the reading of the years covered by the examination.

In place of the examination for three units in Intermediate Latin a candidate may offer the following examinations of the College Entrance Examination Board:

Latin, 1, 2, and 4, or 1, 2 and 4 combined.

#### Advanced Latin.

One unit.

- I. Amount and Range of the Reading Required
- r. The Latin reading, without regard to the prescription of particular authors and works, shall be not less in amount than Cæsar, Gallic War, I—IV; Cicero, the orations against Catiline, for the Manilian Law, and for Archias; Vergil, Æneid, I—VI.
- 2. The amount of reading specified above shall be selected by the schools from the following authors and works: Cæsar (Gallic War and Civil War) and Nepos (Lives); Cicero (orations, letters, and De Senectute) and Sallust (Catiline and Jugurthine War); Vergil (Bucolics, Georgics, and Æneid) and Ovid (Metamorphoses, Fasti, and Tristia).
  - II. SUBJECTS AND SCOPE OF THE EXAMINATIONS
- 1. Translation at sight. Candidates will be examined in translation at sight of both prose and verse. The vocabulary,

constructions, and range of ideas of the passages set will be suited to the preparation secured by the reading indicated above.

- 2. Prescribed Reading. Candidates will be examined also upon the following prescribed reading: Cicero, orations for the Manilian Law and for Archias, and Vergil, Æneid, I, II, and either IV or VI at the option of the candidate, with questions on subject-matter, literary and historical allusions, and prosody. Every paper in which passages from the prescribed reading are set for translation will contain also one or more passages for translation at sight; and candidates must deal satisfactorily with both these parts of the paper, or they will not be given credit for either part.
- 3. Grammar and Composition. See statement under Intermediate Latin.

In place of the examination for four units in Latin a candidate may offer the following examinations of the College Entrance Examination Board:

Latin, 1, 2, 4, and 5, or 1, 2 and 4 combined, and 5.

### SUGGESTIONS CONCERNING PREPARATION

Exercises in translation at sight should begin in school with the first lessons in which Latin sentences of any length occur, and should continue throughout the course with sufficient frequency to insure correct methods of work on the part of the student. From the outset particular attention should be given to developing the ability to take in the meaning of each word—and so, gradually, of the whole sentence—just as it stands; the sentence should be read and understood in the order of the original, with full appreciation of the force of each word as it comes, so far as this can be known or inferred from that which has preceded and from the form and the position of the word itself. The habit of reading in this way should be encouraged and cultivated as the best preparation for all the translating that the student has to do. No translation, however, should be a mechanical metaphrase. Nor should it be a mere loose

paraphrase. The full meaning of the passage to be translated, gathered in the way described above, should finally be expressed in clear and natural English.

A written examination cannot test the ear or tongue, but proper instruction in any language will necessarily include the training of both. The school work in Latin, therefore, should include much reading aloud, writing from dictation, and translation from the teacher's reading. Learning suitable passages by heart is also very useful, and should be more practised.

The work in composition should give the student a better understanding of the Latin he is reading at the time, if it is prose, and greater facility in reading. It is desirable, however, that there should be systematic and regular work in composition during the time in which poetry is read as well; for this work the prose authors already studied should be used as models.

## Elementary Greek.

Two units

The examination will be adapted to the proficiency of those who have studied Greek in a systematic course for two years. It will consist of two parts, which cannot be taken separately:

- (a) The translation at sight of passages of simple Attic prose.
- (b) An examination on Xenophon's Anabasis, directed to testing the candidate's mastery of the ordinary forms, constructions, and idioms of the language.

Before taking the elementary examination the candidate should have read, in addition to the usual grammar work, at least four books of Xenophon's Anabasis, or an equivalent.

In place of the examination in Elementary Greek a candidate may offer the following examinations of the College Entrance Examination Board.

Greek A i and ii, and B.

## Advanced Greek.

One unit.

The examination will be adapted to the proficiency of those who have studied Greek in a systematic course for three years. The two parts of the examination may be taken separately:

- (a) The translation at sight of an average passage of Homer; with questions on ordinary forms, constructions, and idioms, and on prosody.
- (b) The translation into Attic prose of a passage of connected English narrative. The passage set for translation will be based on some portion of the Greek prose works usually read in preparation for college.

Before taking the examination in Advanced Greek the candidate should have completed at least four books of Xenophon's Anabasis, or their equivalent in Attic prose, and six books of Homer's Iliad, or their equivalent in the Odyssey. It is recommended that Greek composition accompany all stages of the preparation, and that the pupil be practiced in reading Greek aloud from the beginning of the course.

In place of the examination in Advanced Greek a candidate may offer the following examinations of the College Entrance Examination Board.

Greek A i, B, C or CH, and F.

#### Elementary History.

One unit.

The examinations in history will be framed so as to require the use of both judgment and memory on the pupil's part. They will presuppose the use of good text-books, collateral reading, systematic note-taking and practice in written work. Geographical knowledge will be tested by requiring the location of places and movements on an outline map.

One of the following:

- 1. Ancient History of Greece and Rome. (a) The history of the Eastern Nations and Greece to the conquest of Greece by Rome, with due reference to Greek life, literature, and art, as treated in the histories of Botsford, Oman, West, or Myers.
- (b) The history of Rome to the end of the Roman Empire in the West (476), with due reference to Roman literature and government. Such texts as those of Myers, Botsford, West, or Allen will indicate the character of the work desired.

- 2. The History of England. The histories of Andrews, Cheyney, Larned, and Montgomery will indicate the character of the work expected.
- 3. The History and Government of the United States. Such texts as those of McLaughlin, Johnston, Channing, Ashley, and Reed should be used.

It is recommended that all candidates for admission to the courses leading to the degree of A.B. or S.T.B. should offer Greek and Roman history.

The requirement in history implies one year's work in each subject presented of not less than five periods a week. A notebook of not less than fifty written pages, based upon three hundred pages of collateral reading, should be presented at the time of examination. In place of any one of the examinations described above a candidate may offer any one of the four examinations in History of the College Entrance Examination Board, but candidates desiring to offer substitutes must give notice to the Secretary of the Faculty at least one month previous to the time set for the examination. The attention of teachers is called to the Report of the Committee of Seven, published by the Macmillan Company, New York, under the title, "The Study of History in Schools," and to the "History Syllabus for Secondary Schools" published by Heath and Co., Boston.

The attention of teachers is called also to the Report of the Committee of Five of the American Historical Society. "The Study of History in Secondary Schools" (New York, The Macmillan Company, 1911).

## Advanced History.

Any of the following not offered to fulfil the elementary requirement:

- 1. Ancient History as described above.
- 2. The History of England as described above.
- 3. The History and Government of the United States, as described above.

Each of these subjects requires one year's study of not less than five periods a week. A note-book of not less than fifty written pages, based upon three hundred pages of collateral reading, should be presented at the time of the examination. Equivalents for the subjects outlined above will be accepted, upon due notice, as indicated above under Elementary History provided that the subject so offered has not been accepted for the elementary History requirement.

#### Mathematics.

A knowledge of the metric system, and ability to perform accurately the ordinary processes of arithmetic, are presumed.

A 1. Algebra to quadratics. One unit.

The four fundamental operations for rational algebraic expressions.

Factoring, determination of highest common factor and lowest common multiple by factoring.

Fractions, including complex fractions, and ratio proportion. Linear equations, both numerical and literal, containing one or more unknown quantities.

Problems depending on linear equations.

Radicals, including the extraction of the square root of polynomials and of numbers.

Exponents, including the fractional negative.

A 2. Algebra. Quadratics and beyond. One unit. Quadratic equations, both numerical and literal.

Simple cases of equations with one or more unknown quantities, that can be solved by the methods of linear or quadratic equations.

Problems depending on quadratic equations.

The binomial theorem for positive integral exponents.

The formulas for the nth term and the sum of the terms of arithmetical and geometric progressions, with applications.

c. Plane Geometry, including the usual theorems on straight lines, angles, rectilinear figures, circles, and regular polygons;

similar triangles and proportion; construction; original exercises in demonstration; numerical problems in mensuration.

One unit.

B. Advanced Algebra: Permutations and combinations; complex numbers and the graphical representation of sums and differences; determinants including the use of minors, and the solution of linear simultaneous equations; solution of numerical equations of higher degree and so much of the theory of equations, with graphical methods, as is necessary for their treatment, including Descartes' rule of signs and Horner's method. Credit in Advanced Algebra is given only on examination.

One-half unit.

- D. Solid Geometry, including properties of straight lines and planes, dihedral and polyhedral angles; of projections, of polyhedrons, including prisms, pyramids, and the regular solids; of cylinders, cones, and spheres; of spherical triangles, and the measurement of surfaces and solids.

  One-half unit.
- F. Plane Trigonometry, including the definition and relations of the six trigonometrical functions as ratios, proof of important formulæ, solution of trigonometric equations of a simple character, theory of logarithms and use of tables, solution of right and oblique plane triangles.

  One-half unit.

In place of the examinations in Mathematics a candidate may offer the examinations of the College Entrance Examination Board as follows:

Math. A for A; Math. C for C; Math. B for B; Math. D for D; Math. F for F.

Physics. One unit.

The unit in Physics consists of at least 120 periods of sixty minutes each. Time spent in the laboratory shall be counted one-half at its face value. The course of instruction should include: (1) The study of one standard text-book. (2) Individual laboratory work consisting of experiments requiring at least the time of 30 double periods. Each student should per-

form at least 30 experiments, so distributed as to cover as fully as possible the subject matter of the text-book.

In lieu of the presentation of the laboratory note-book, at the time of the examination, the candidate must present a certificate in the following form:

#### TEACHER'S CERTIFICATE

School
19
I certify that has personally
performed and properly recorded in a suitable note-book
experiments in the physical laboratory of the
School, during the year
The entire course has occupied time equal toperiods of 60
minutes each, of which hours have been given to the laboratory
work and hours to lecture and recitation work.
Signed
Teacher of Physics.
The teacher may here enter the final grade of per cent.

In place of the above, candidates may present the examination of the College Entrance Examination Board in Physics.

## Chemistry. One unit.

Preparation for this requirement presupposes a course in general inorganic chemistry (non-metals and metals) of not less than five periods a week for a year. The amount of class work should equal that in An Introduction to the Study of Chemistry, by Ira Remsen, and the experiments should be equivalent to those in Remsen's Laboratory Manual. Time spent in the laboratory shall be counted at one-half its face value. The experiments must be performed by the student, and a certified laboratory note-book must be presented at the time of the examination.

In place of the above, candidates may offer the examination of the College Entrance Examination Board in Chemistry.

## Biology, Botany and Zoology.

One unit each

In Biology, Botany and Zoology the examiners give more weight

to the character of the work and the development of scientific habits than to the time spent; but at least five periods a week for a year must be given to each subject presented, and of this at least a half should consist of laboratory work. Certified copies of laboratory note-books must be presented. The work should be in structural and physiological lines and should include a detailed study of at least ten types. While it is desirable that these types should represent the chief phyla of the plant and animal kingdoms, it is most important that through their study the student shall become familiar with the experimental or inductive method of work.

In place of the examinations in Biology, Botany and Zoology, candidates may offer the examinations in Biology, Botany and Zoology of the College Entrance Examination Board.

#### Geology or Geography.

One unit.

- r. Geology: Le Conte's Elements of Geology or a book of equivalent grade, including a similar account of evolutionary theory.
  - 2. Geography: Davis, or book of equivalent grade.

At least five periods a week for a year must have been given to the subject presented. There should have been some laboratory work and excursions. Certified copies of note-books of laboratory work and excursions must be presented.

In place of the examination in Geography, candidates may offer the examination in Geography of the College Entrance Examination Board.

## Freehand Drawing.

One unit or one-half unit.

Such a knowledge of the fundamental principles of perspective is required as shall enable the student to draw a simple geometric figure with or without the use of a model. Certified drawings from a systematic course must be submitted for approval and the student may be examined on all points in doubt.

In place of the above the candidate may offer the examination in drawing of the College Entrance Examination Board.

## Mechanical Drawing.\*

One unit.

Accuracy and neatness in drawing is of the first importance, and no amount of work will make amends for neglect in these respects. The student must be familiar with the use of ordinary instruments, and able to solve geometrical problems with accuracy and rapidity. He must have an elementary knowledge of projection, intersection and development, and should also be practiced in the drawing of the ellipse, the parabola, and the hyperbola. The suggested course is included in the first one hundred pages of Anthony's Elements of Mechanical Drawing. Certified drawings must be submitted for approval and the student may be examined on all points in doubt.

#### Shopwork.\*

The following units are given for courses satisfactorily pursued in well organized and fully equipped manual training or technical high schools in which the broad foundations of manual and graphic culture are given. The elementary work in the several courses must be thoroughly covered, and no credit will be given for premature engineering work.

Joinery	One-half unit
Wood Turning and Elementary Pattern Making	One-half unit
Forging	One-half unit
Bench and Machine Metal Fitting	One-half unit

Details of the work required for preparation in the above courses may be obtained by application to the Department of Mechanic Arts.

## Elementary Economics.

One-half unit.

Preparation for Economics presupposes that the candidate has studied the subject in a systematic course of at least three periods a week for one full year. Credit in Economics will be given only on examination. The examination will be based upon such text-books as Bullock's or Seager's Introduction to the Study of Economics. A knowledge of civics and, particu-

<sup>•</sup>Not more than two units may be counted by any candidate in the subjects of Drawing and Shopwork.

larly, modern industrial history is of great value in supplementing the study of economic theory.

#### Music.

Entrance credit in Music is given only on examination. Not more than one unit in Music may be counted by any candidate.

(A) MUSICAL APPRECIATION. One-half unit.

The examination will be adapted to the attainment of those who have had one year's systematic training, with three lessons a week, or its equivalent. The candidate is expected to have (1) a general knowledge of the principal musical forms—song, classic dance, fugue, sonata (all movements), symphony-and of their historical development; (2) a general knowledge of the lives and environment of at least ten composers, including Bach, Mozart, Beethoven, Schubert, Chopin, and five of the following: Purcell, Handel, Gluck, Haydn, Cherubini, Weber, Rossini, Glinka, Mendelssohn, Schumann, Wagner, Verdi; (3) familiarity with certain designated works, the list of which may be had on application to the Department of Music. In the examination on these works, the candidate will be expected to identify characteristic portions of the works set, when played in any key by the examiner; and to give intelligent information concerning the form and character of the works themselves. The test will not require ability to perform, nor to read from printed music.

(B) HARMONY. One-half unit.

The examination will be adapted to the proficiency of those who have had one year's systematic training, with three lessons a week, or its equivalent. The candidate should have acquired (1) the ability to harmonize, in four vocal parts, simple melodies of not fewer than eight measures, in soprano or in bass: these melodies will require a knowledge of triads and inversions, of diatonic seventh chords and inversions, in the major and minor modes; and of modulation, transient or complete, to nearly-related keys; (2) analytical knowledge of ninth chords, all non-harmonic tones, and altered chords (including augmented

chords). [Students are encouraged to apply this knowledge in their harmonization.]

It is urgently recommended that systematic ear-training (as to interval, melody, and chord) be a part of the preparation for this examination. Simple exercises in harmonization at the pianoforte are recommended. The student will be expected to have a full knowledge of the rudiments of music, scales, intervals, and staff-notation, including the terms and expression-marks in common use.

## (D) PIANOFORTE, OR (E) VOICE, OR (F) VIOLIN. One-half unit.

The examination in each of these subjects will consist of a test in theory, and a test in performance. The former will be conducted in writing, and will be adapted to the proficiency of those who have had one year's systematic training, with one lesson a week, or its equivalent. The candidate should have acquired:

A knowledge of the rudiments of music, scales, intervals, and staff-notation, including the terms and expression-marks in common use; the ability to analyze the harmony and form of hymn-tunes and simplest pieces for the pianoforte, involving triads and the dominant seventh chord and their inversions, passing tones, and modulation to nearly-related keys; the ability to harmonize, on paper, in four vocal parts, melodic fragments involving the use of triads and the dominant seventh chord and their inversions in major keys.

As a basis of the test in performance, the candidate is to furnish a detailed statement from the teacher, showing the course of instrumental or vocal study pursued.

In place of the above, candidates may offer the corresponding examination of the College Entrance Examination Board: Music A, B, and D or E or F.

## **EXAMINATIONS** OF THE COLLEGE ENTRANCE EXAMINATION BOARD

In June, 1918, the admission examinations of this College will be the examinations of the College Entrance Examination Board, of which Tufts College is a member. The examinations will be held during the week June 17–22, 1918, in Robinson Hall, Tufts College, Massachusetts.

All applications for examinations must be addressed to the Secretary of the College Entrance Examination Board, 431 West 117th Street, New York, N. Y., and must be made upon a blank form, to be obtained from the Secretary of the Board upon application.

If the application is received sufficiently early the examination fee will be \$5.00 for candidates examined in the United States and Canada, and \$15.00 for candidates examined outside of the United States and Canada. The fee should be remitted by postal order, express order, or draft on New York to the order of the College Entrance Examination Board.

The applications and fees of candidates who wish to be examined outside of the United States and Canada must reach the Secretary of the Board at least five weeks in advance of the first day of the examinations, that is, on or before Monday, May 13, 1918.

The applications and fees of candidates who wish to be examined in the United States at points west of the Mississippi River must be received at least three weeks in advance of the examinations, that is, on or before Monday, May 27, 1918.

The applications and fees of candidates who wish to be examined in the United States at points east of the Mississippi River, or on the Mississippi River, must be received at least two weeks in advance of the first day of the examinations, that is, on or before Monday, June 3, 1918.

When the candidate has failed to obtain the required blank form of application for examination the usual examination fee will be accepted if the fee arrives not later than the specified date accompanied by a memorandum containing the name and address of the candidate, the examination centre at which he wishes to present himself, and a list of all the subjects in which he may have occasion to take the Board's examinations.

Applications received later than the dates named will be accepted when it is possible to arrange for the admission of the candidates concerned, but only upon payment of \$5.00 in addition to the usual fee.

A list of the places at which examinations are to be held by the Board in June, 1918, will be published about March 1. Requests that the examinations be held at particular points, to receive proper consideration, should be transmitted to the Secretary of the Board not later than February 1.

For the convenience of those who present the examinations of the College Entrance Examination Board, the following table of equivalents is presented:

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TUFTS COLLEGE ENTRANCE
                                   COLLEGE ENTRANCE EXAMINATION
                                           BOARD EQUIVALENT
         SUBJECTS
English 1
                                   English 1
English 2
                                   English 2
                                   German A
Elementary German
Intermediate German
                                   German B
Advanced German
                                   German BC
Elementary French
                                   French A
Intermediate French
                                   French B
Advanced French
                                   French BC
Elementary Latin
                                   Latin 3
                                   Latin 1, 2 and 4, or 1, 2 and 4 combined
Intermediate Latin
Advanced Latin
                                   Latin 1, 2, 4 and 5, or 1, 2 and 4 com-
Elementary Greek
                                       bined, and 5
Advanced Greek
                                   Greek A i and ii B, and G
                                   Greek Ai, B, C or CH, F, and G
Elementary History
Advanced History
                                   History A, B, C, or D
Mathematics
                                   History A, B, C, or D
    Algebra AI
                                   Mathematics AI
    Algebra A 2
                                   Mathematics A 2
                                   Mathematics C
    Plane Geometry
    Advanced Algebra
                                   Mathematics B
    Solid Geometry
                                   Mathematics D
    Trigonometry
                                   Mathematics F
Physics
                                   Physics
Chemistry
                                   Chemistry
Botany
                                   Botany
                                   Zoology
Zoology
Biology
                                   Biology
Geology or Geography
                                   Geography
Freehand Drawing
                                   Frehand Drawing
Mechanical Drawing
                                   Mechanical Drawing
Music B, D, E, F
                                   Music B, D, E, F
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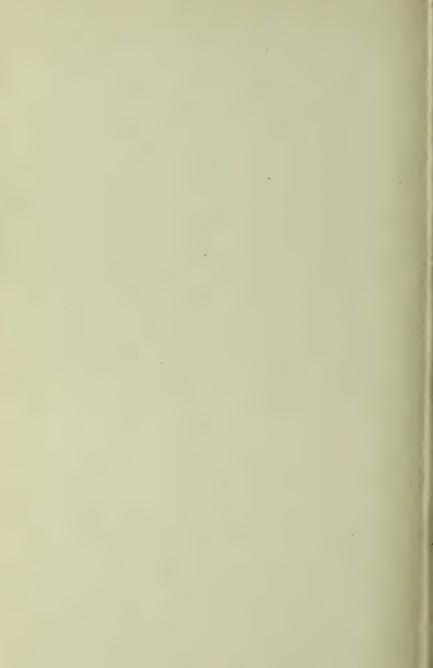
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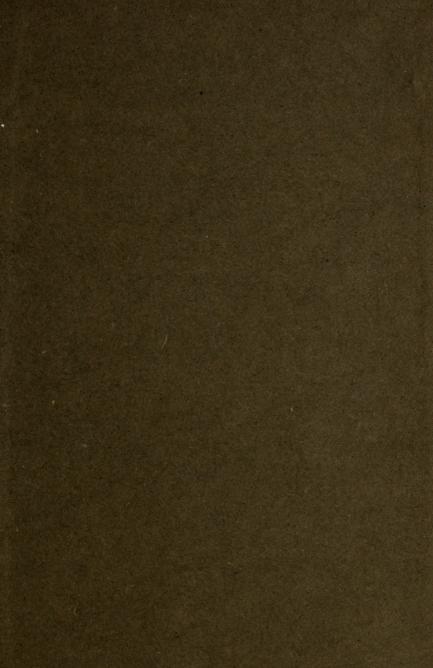












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